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MASTER'S THESIS

Title of Master's Thesis

"Effect of ASEAN policies and country risks on services FDI inflow rate"

Submitted by

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Acronyms

ACIA – ASEAN Comprehensive Investment Agreement

AEC – ASEAN Economic Community

AFTA – ASEAN Free Trade Area

AHRD – ASEAN Human Rights Declaration

AIA – ASEAN Investment Area

AIMD – ASEAN Integration Monitoring Directorate

APSC – ASEAN Political-Security Community

ASCC – ASEAN Socio-Cultural Community

ASEAN – Association of Southeast Asian Nations

CEPT – Common Effective Preferential Tariff

CLMV – Cambodia, Lao PDR, Myanmar and Vietnam

GATS – General Agreement on Trade in Services

IL – Inclusion List

NDG – Narrowing the Development Gap

SWP – Sectoral Work Plans

AFAS – ASEAN Framework Agreement on Services

Part I

1.1 Introduction

The positive increase of international trade around the globe is continuously being pursued by investors. This trend covers both merchandise trade as well as commercial services. Worldwide Economic situation influences the flow of goods and services. A direct effect can be seen through the economic downturn during 2009 and 2015, where the trading ratio drops sharply.[1] Despite these slumps, world economy tends to always bounce back a year later. Growth rate of service sector is increasing steadily, where in 2015, developing economies contributed up to 36% of the total trade in services.

International businesses have different motives in expanding abroad. For instance, risk diversification, competitive advantages, resource seeking etc.[2] Types and size of companies also influence mode of entry a firm may take.[3] These factors play a role in all strategic decisions, for which each one has different weight and importance to individual firms. It is therefore crucial for international firms to manage both financial and strategic corporate risks.[4] Though export, acquisition and joint venture tends to bare lower level of risks in international markets, they still face uncertainties and informal risks.[5] Foreign direct investments are on the other hand exposed to a wide range of risks, both formal and informal ones. Cultural, political, foreign exchange rate, policy and corruption are ones of many that can impact strategic decisions. This thesis will be focusing on formal and measurable types of risks foreign direct investment encounter. As different industries have distinctive conditions and policies firms must take into consideration,[6] only service sector will be explored, as there is already a great deal of researches on agriculture and manufacturing sectors.

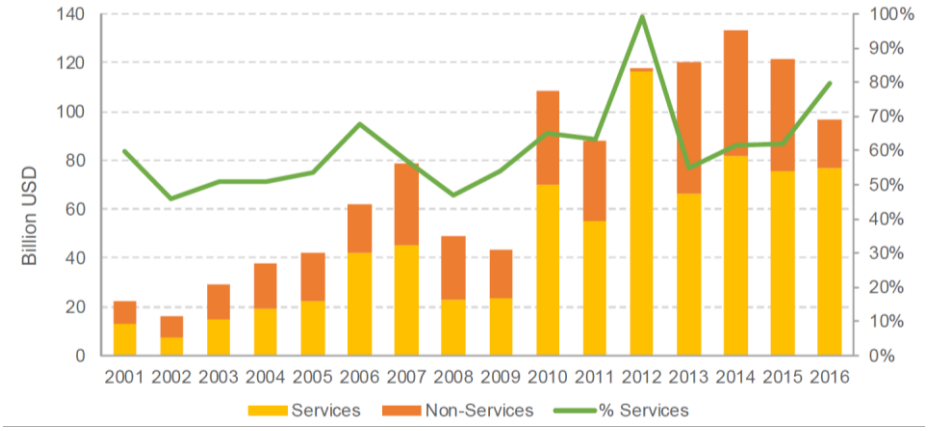
Southeast Asia region is becoming more important trade area in the past years, since the joint agreement of AEC (ASEAN Economic Community) was signed in 2015. The community aims to integrate economies for southeast Asian nations by, for instance reducing tariffs on goods and free movement of services. New frameworks and policies developed from AEC can possibly be attractive to foreign investors in service sector. This master thesis will therefore be focusing on this market to further explore the effect and result of this recent implementation of economic integration policies.

[1] World Trade Statistical Review, 2016
[2] Luo Y.; Tung R., 2007
[3] Barkema H.; Vermeulan F., 1998
[4] Miller K.D., 1992
[5] Agarwal J.; Feils D., 2007
[6] Luo Y., 1999

1.2 Objective

Reorganization of ASEAN region implies that there are many aspects in the region to be developed. These aspects include social, political and most importantly economic integration. International trades and investments are important for the region to flourish in terms of financial capital, human capital and technological innovation. Such advancements require external knowledge sources, that foreign investors can transfer. Therefore, foreign direct investments are crucial for the region to promote in order to benefit from technology spillovers, knowledge transfer as well as financial capital. As there already exist a handful scientific researches regarding ASEAN as manufacturing hub to reduce production costs, especially for automotive industry, it will be more intriguing to conduct a research on service sector. The main focus of this thesis will be on the service sector of ASEAN economy. ASEAN not only possess great amount of natural resources, but also human resources with high development potential. With the help of ASEAN frameworks pushing economies into the tertiary sector, such potential can be realized.[7] ***Error! Reference source not found.*** graphically shows growth and fluctuation of services FDI in ASEAN. Frameworks such as tariff reduction and improving economic and investment environment to increase trade openness are two most important factors for this thesis. Next section will elaborate these frameworks.

Figure 1 - Foreign Direct Investment into ASEAN



Source: ASEANStats (2017) ASEAN Services Report 2017- The Evolving Landscape. Chart 9

1.3 Association of Southeast Asian Nations

In order to have a better understanding of frameworks and where they derived from, general background information about the region is the following. Association of Southeast Asian Nations, abbreviated as ASEAN, was established in 1967, where members of the community formed mutual agreements to

[7] Chia S.Y., 2014

develop regional economic and social standards. The founding members are Indonesia, Malaysia, Philippines, Singapore and Thailand. ASEAN was founded with the signing of ASEAN Declaration on the 8th of August 1967 in Bangkok, Thailand or also known as Bangkok Declaration. With the following decades, additional members join the association to be part of the development and integration. These nations include Brunei Darussalam, Vietnam, Lao PDR, Myanmar and Cambodia. This makes up a total of ten Member States as of 2018.

ASEAN Declaration sets aims and purposes for Member States, which comprise of the following:

1. To stimulate economic growth, social progress and cultural development through equality and partnership of members;
2. To promote peace and stability within the region by practicing the principles of United Nations Charter;
3. To advocate collaboration in fields of common interests, such as economic, social, technical and many more;
4. To provide assistance for each other in terms of training and research facilities in the field of high education;
5. To enhance the flow of agriculture and manufacturing trades by developing transportation and facilities in order to increase living standards of those in such industries;
6. To promote Southeast Asian studies;
7. To retain and support cooperation with international and regional organizations already present in the region to further make use of prospect mutual benefits.

The aggregate implementation of these aims will contribute to promoting FDI into the region. Economic growth stimulation allows region as a whole to become more attractive for foreign investors, who are looking for dynamic and fasting growing market in terms of both size and stability. The stability of both economic and political is supported by the second and third aim of this declaration. Cooperation of regional and international organizations come hand in hand with flow of goods. Although services are not explicitly defined, the development of transportation, facilities and trainings for personal in expert fields guide ASEAN into developing service sector's capability and therefore creating attractive investment environment.

In addition to these purposes, ASEAN Member States also follow fundamental principles:

1. Mutual respect of all nations;
2. Rights for each member to govern its own state without external interference, subvention or coercion;
3. Members are not to interfere with other nation's internal affairs;
4. Settling differences or disputes without hostility;

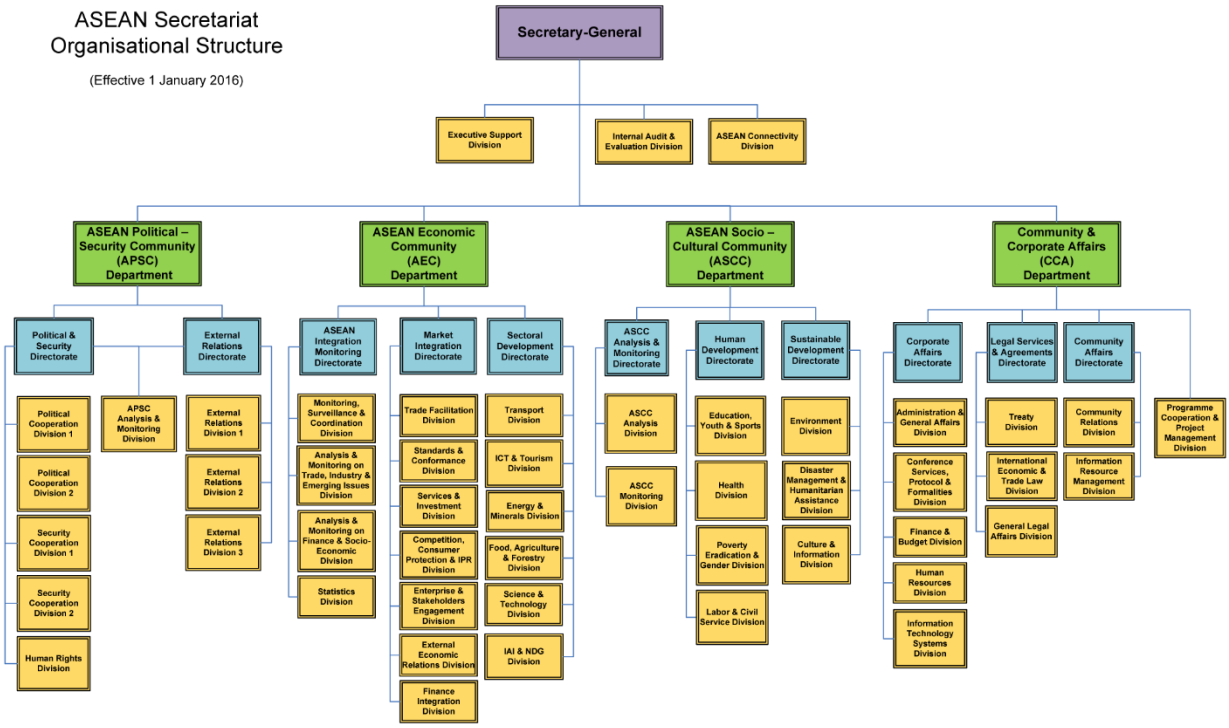
5. Effective cooperation among members[8]

These five principles are designed to maintain harmony between nations in ASEAN. The outcome of these principles is relevant to foreign investors, because the less hostile investment environment is, the more likely it is that investment projects will take place. In addition, these principles lay out the sovereignty of each nation. Foreign investors can take advantage of the difference in internal laws and regulations while assured by regional harmony to freely trade goods and services.

ASEAN Charter, which was signed by Member States during the gathering of ASEAN Foreign Ministers in Jakarta on 15th December 2008, has become a legally binding agreement between members. The charter lays out legal status as well as institutional framework for ASEAN. This suggests ASEAN norms, rules and values. The Charter clarifies rights and obligations of members, procedures to which a new member can be admitted, the council and secretariat, immunities and privileges, administration and procedures within the association etc. [9] ASEAN Charter will also be registered with the Secretariat of the United Nations to be part of its Charter. This legal framework is highly relevant to political commitment at the top level of each member states. It builds the structure of ASEAN and encourage leaders to be involved in enhancement and commitment to reach the common goals. The Charter intends to specify boundaries in which each member can operate and act within the region to carry out new changes agreed upon.

Figure 2 - ASEAN Secretariat Organizational Structure 2016

[8] ASEAN, 2018
[9] ASEAN Secretariat, 2017



Source: ASEAN Secretariat, 2016. http://asean.org/asean/asean-structure/organisational-structure-2/. 27.03.2018

Figure 2 above shows the global organizational structure of ASEAN, where it can be broken down into four main departments. At the top of the organization stands the Secretary General, who is selected from a pool of ASEAN nationals based on alphabetical rotation and has the term of office of five years. The Chairmanship of ASEAN also follows the alphabetical rotation, but unlike Secretary General, it rotates annually; the 2018 Chair is Singapore. Task is to chair various ASEAN Summits and Community Councils.

ASEAN not only encourages development within the region, but also with international partners. Its external relations include China, United States, Russia, the European Union and many more. The aim is to develop harmonious and mutual beneficial cooperation and partnerships. Thus, each relation is structured according to four main departments of ASEAN.

Evidently, ASEAN has been putting a lot of efforts into its community. Over the past decade, the GDP growth of ASEAN has been on the upward trend[10], with a slight dip in 2015 due to world economic situation with the drop in oil price.[11] The average annual growth rate of this region is approximately 5.3%, the 6th largest in the world. Between 2007-2015, the total trade increased by 700 billion USD and has attracted 121 billion USD worth of foreign direct investment.[12] The intra-ASEAN flows of inward

[10] Statista, 2018
[11] Desjardins J., 2016
[12] ASEAN Secretariat, 2017

FDI and intra-ASEAN trade in services are constantly growing, which can be considered as a great opportunity for foreign investors to take advantage of this new economic flow in ASEAN.[13]

Regarding ASEAN organizational structure, only three departments will be further explored to demonstrate the importance of ASEAN communities and their policies. The following sections will briefly explain definition of each community and its influence on FDI flows of services. The three pillars were agreed on at the Cha-am Hua Hin Declaration on the ASEAN Roadmap for an ASEAN Community in 2009. These are ASEAN Political - Security Community; ASEAN Socio - Cultural Community and ASEAN Economic Community.[14]

ASEAN Political – Security Community

This ASEAN community of APSC aims to maintain regional peace and stability as well as to ensure a just and harmonious environment for its people. Its first blueprint of 2009-2015 was guided by ASEAN Charter which intended for APSC to be established by 2015. The framework was followed through and by 2016, a new blueprint (APSC Blueprint 2025) was issued with guidelines renewals.

The four main characteristics and elements of APSC Blueprint 2025 are the following:

1. Rules-Based, People-Oriented, People-Centered Community
2. Peaceful, Secure and Stable Region
3. ASEAN Centrality in a Dynamic and Outward-Looking Region
4. Strengthened ASEAN Institutional Capacity and Presence[15]

Southeast Asia is not unfamiliar with conflicts between nations as well as disturbances within its own countries. Political issues have at times been threatening national security, which directly influence wellbeing of its people. Some known issues are for example weak socio-political cohesion, legitimacy problems, interstate territorial dispute and intra-regional ideological polarization. Example of such problems are the Cold Wars in Southeast Asia; one being Vietnam's invasion of Cambodia in 1978, and later with confrontation of Indonesia-Malaysia-Singapore. [16] These phenomena threatened the regional security environment.

Since the establishment of ASEAN back in 1967, the founding members have not gone to war with each other. The APSC guides these nations to settle conflicts in a peaceful manner. However, the APSC was newly established and still had undefined territories. When hard times hit ASEAN, it was not easy for

[13] ASEAN Secretariat - ASEAN FDI Database, 2017
[14] ASEAN Secretariat, 2014
[15] ASEAN Secretariat, 2016
[16] Acharya A., 2014

Member States to remain cohesive, as national norms and values differ greatly. The setback can be seen through the Asian economic crisis, where some critics spoke out that ASEAN failed to develop "concrete institutional mechanisms and procedures for conflict resolution" (Archarya, 1999). Other undeveloped topics in APSC were human rights and air pollution due to forest fire (e.g. from Indonesia).

With several topics untouched and some scarcely discussed, the new Blueprint (2025) has tried to capture and integrate them into ASEAN practices. The topic of human rights stands at highest priority, which can be exhibited in the Blueprint. The clause A.2 of Rules-Based, People-Oriented, People-Centered Community explains the expectations of how nations should promote human rights. As Southeast Asia is not too well informed about this topic, it is appropriate to set basic education guidelines. This allows nations to ease into the topic and gradually raise concerns, instead of directly implementing changes to societies.

Though the new Blueprint made a big step from previous one, it is not to be taken lightly. Critics argue that, for instance, the new human rights guidelines can at one point be abused by ASEAN elites, meaning one can use it for own-benefits at a cost of its people. The ASEAN Intergovernmental Commission on Human Rights or AICHR can, in turn become a tool for elites to manage conflicts resulting from mobilization of people in the region due to human rights abuses.[17] Therefore, new policies and changes in the Blueprint must be followed-up on to assure regularity. Current status of APSC is still in development with more explicit rules and guidelines of human rights with the signing of Phnom Penh Statement on the Adoption of the ASEAN Human Rights Declaration (AHRD) in 2012.[18]

ASEAN Socio – Cultural Community

Unlike APSC, the ASEAN Socio-Cultural Community or ASCC, is more people oriented. The community goals are:

1. To build a participative and socially-responsible community
2. Develop an inclusive community where quality of life, equality of opportunities and human rights promotion and protection are the main topics
3. Develop a sustainable community which includes social development and environmental protection
4. Establish a resilient community for which educate people to be able to adapt to changes and unexpected occurrences

[17] Fawcett P.; Flinders M.; Hay C.; Wood M., 2017
[18] ASEAN Secretariat, 2013

5. Promote a dynamic and harmonious community for people to be proud of its identity, culture and heritage.[19]

This pillar developed a scoring system that allows them to measure the progress and performance of each nation. There are six categories and they are measured with both quantitative and qualitative indicators. Each category contains 32 elements and elements are determined by a total of 336 Actions/Programs and Activities. The categories are *A*: Human Development; *B*: Social Welfare and Protection; *C*: Social Justice and Rights; *D*: Ensuring Environmental Sustainability; *E*: Building the ASEAN Identity; and *F:* Narrowing the Development Gap (NDG). The scorecard only takes into account categories A-E with 31 elements and 208 indicators. The results give an overview achievement level of objectives set in ASCC Blueprint.

Figure 3 - 2015 ASCC Scorecard

ASCC Characteristic	Quantitative	Qualitative	Total
Human Development	34	5	39
Social Welfare and Protection	68	16	84
Social Justice and Rights	8	3	11
Ensuring Environmental Sustainability	16	12	28
Building ASEAN Identity	10	0	10
Total	136	72	208

Source: ASEAN Secretariat, 2016. 2015 ASEAN Socio-Cultural Community (ASCC) Scorecard. 29.03.2018

The scorecard helps ASEAN community to evaluate the progress, which on one hand used as a monitoring system of ASCC and on the other hand, to assist on developing new projects and activities to further enhance the implementation of its goals.[20] *Figure 3* above shows the number of indicators used to evaluate each category. In the report, some critical issues were mentioned regarding the data collection and scorecard methodology, such as; some indicators were not agreed by the ASCC council, incomplete set of data for all required years, unavailability of data sets, data inconsistency and inadequacy of detail description of term definitions and methodology.

ASEAN Economic Community

The last pillar is ASEAN Economic Community or AEC. It was established in 2015 after a successful follow through on the earlier AEC Blueprint of 2008-2015. AEC is simply an attempt to integrate Southeast Asian economies. This agenda is a big milestone for not only within the region, but also for

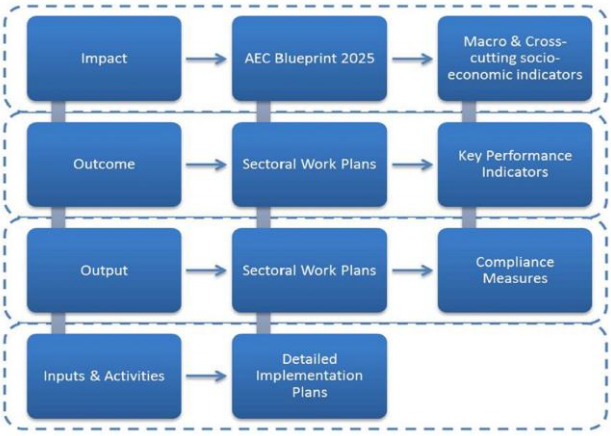
[19] ASEAN, 2018
[20] ASEAN Secretariat, 2016

international partners. The economic integration means the market size is the 7th largest in the world with approximately a value of 2.6 trillion USD with over 622 million people. The adoption of new AEC Blueprint 2025 emphasizes on the following five characteristics:

1. A Highly Integrated and Cohesive Economy;
2. A Competitive, Innovative, and Dynamic ASEAN;
3. Enhanced Connectivity and Sectoral Cooperation;
4. A Resilient, Inclusive, People-Oriented, and People-Centered ASEAN;
5. A Global ASEAN.[21]

These five characteristics have strategic measures to encourage and monitor implementations of each sub-section in AEC. Strategic measures will be able to help AEC review and update each sub-section's achievement periodically, in order to adapt and renew activities to maintain relevance and efficacy. Industrial association and commercial partnerships will also be audited to make certain of inclusive and participatory community. The detailed strategic measures and sectoral workplans (SWP – Sectoral Work Plans) are documented in the AEC 2025 Consolidated Strategic Action Plan (CSAP). The CSAP is publicly available as a reference of how ASEAN economic integration will be carried out.

Figure 4 - AEC 2025 M&E Framework



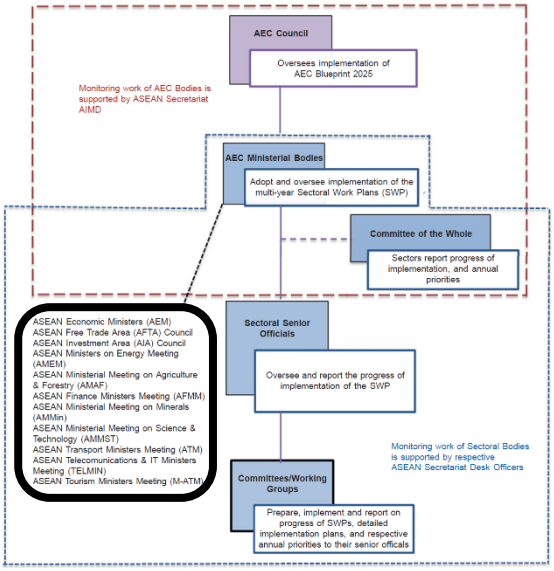
Source: ASEAN Secretariat, 2017. Towards ASEAN Economic Community: 2025 Monitoring ASEAN Economic Integration.

The quantitative and qualitative results from SWP will be used to evaluate sectoral progress. The AEC established a framework and methodology specifically for it – Monitoring and Evaluation Framework (M&E) for regional economic communities. *Figure 4* presents the graphical workflow of how M&E functions. The SWPs and Detailed Implementation Plans are stated in the CSAP, which reflects the overall objectives of AEC Blueprint 2025. These data are collected acts as Key Performance Indicators,

[21] ASEAN, 2018

which are then calculated. The results are measured and evaluated through the framework that is broken down into three main parts; Compliance Monitoring, Outcomes Monitoring and Impact Evaluation. The overview of AEC bodies that play parts in M&E are shown in *Figure 5*, where the AEC Council stands at the peak with main objectives in mind. The information and progress reports are fed through the lines of sectoral works which can be seen in the box on the left.

Figure 5 - Roles of AEC Bodies



Source: ASEAN Secretariat, 2017. Towards ASEAN Economic Community: 2025 Monitoring ASEAN Economic Integration.

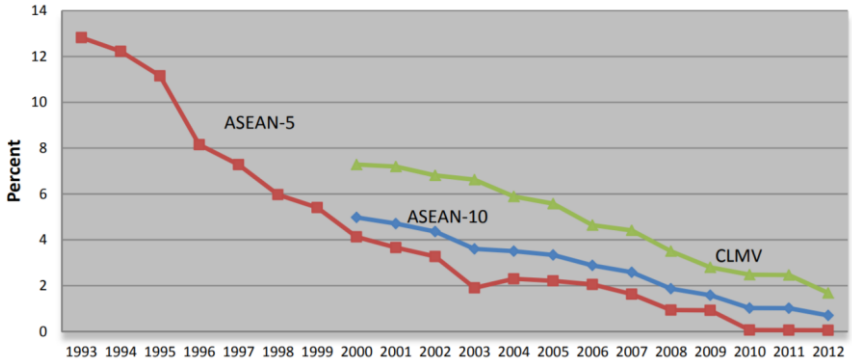
Two main AEC sectoral councils relevant to this research are the ASEAN Free Trade Area (AFTA) and ASEAN Investment Area (AIA). The following sections will explain these in more detail including policies such as Common Effective Preferential Tariff (CEPT) and ASEAN Framework Agreement on Services (AFAS).

The ASEAN Free Trade Area aims to modify tariffs of imports within the region to promote free flow of goods. A removal of intra-regional tariffs, quantitative restrictions and other non-tariffs barriers are to be understood, where AEC has established the AFTA (1993) and its Common Effective Preferential Tariff (CEPT) Scheme. CEPT was firstly applied to ASEAN-6[22] to bring down intra-regional tariffs rate to 0-5 percent. As different products have different effects on nation's economies, a list of products that apply to CEPT scheme is necessary. The CEPT Inclusion List (IL) exhibits products that ASEAN Member States must eliminate tariffs by a determined timeframe. The signing of the Protocol to Amend the Agreement on the CEPT Scheme for the AFTA in 2003 set an agreement, that ASEAN-6 will eliminate import duties on products in IL by 1st of January 2010 and CLMV should do so by 1st of January 2015 but by 2018 for sensitive products.[23] *Figure 6* shows the progress of tariff elimination

[22] ASEAN-6 is referred to Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore and Thailand
[23] AEC, 2003

from 1993-2012. ASEAN founding members have achieved the planned reduction and CLMV are in progress. The recent update in 2015 shows that Brunei Darussalam and Singapore sunk their import tariffs down to complete zero, and other ASEAN-5 nations have approximately 0.01-0.11 percent of tariffs with the Philippines being the highest, not yet able to cut down tariffs completely.[24]

Figure 6 - Intra-ASEAN Preferential Tariffs 1993-2012 (Average CEPT Rate)



Source: The ASEAN Secretariat-The World Bank, 2013. ASEAN Integration Monitoring Report.

The effect of AFTA on the actual total intra-ASEAN trade in goods is unclear, as researched by Siah & Choong & Yusop (2009), the bilateral trade between ASEAN-5 depends on many factors. The paper conducted an empirical study with gravity model, where dependent variables include size of economy, GDP per capita, distance and transportation costs between two countries as well as AFTA references. The research concluded that AFTA may not be benefitting for all countries in ASEAN and a possible trade deflection[25] can occur. The tariffs that are being decreased could have a reverse effect on nation's economies because it is a source of income lost and this gives an incentive for countries to increase tariffs against extra-ASEAN traders.

The AFTA also has another purpose when integrated into the AIA – ASEAN Investment area. The AIA, signed in 1998, has the objective to make ASEAN a high competitive area to encourage ASEAN and non-ASEAN investors to invest in the region. The agreement of ACIA (ASEAN Comprehensive Investment Agreement) states that the members must create a free, open and transparent investment environment.[26] The benefits of AIA, are such that of wider access range of industries and economic sectors and lowering transaction costs within the region.[27] As of 2015, AIA applies to five main sectors; manufacturing, agriculture, fishery, forestry, and mining and quarrying. In addition to those are services that serve these sectors.[28] A study by Ismail & Smith & Kugler (2009) investigated the effect of AFTA

[24] ASEAN Secretariat, 2017
[25] Trade deflection: „Refers to goods produced in a third country entering a free trade area through a member country having low tariff." – Sharan V., 2006
[26] ASEAN Secretariat, 2013
[27] Hew D., 2007
[28] ASEAN Secretariat, 2015

on FDI inflow rate in AIA. The empirical results show that by being a member in AFTA, the FDI inflow rate from ASEAN-5[29] to new members increases, but this conclusion does not apply to flows within ASEAN-5. Another empirical study revealed a negative correlation between total FDI flows within ASEAN and CEPT scheme. It is implied that as trade barriers inter-ASEAN decreases, the rate of operation relocation will decrease. Another negative correlation was also proven for non-ASEAN FDI. The research suggests that non-ASEAN investors are incentivized by resources in ASEAN; resource-seeking and/or efficiency-seeking, for which the operations will be moved elsewhere, if this competitiveness were to diminish.[30]

In addition to liberation of trade in goods, trade in services is also of importance for the ASEAN community. The term services include healthcare, education, water-provision, telecommunications, transport, tourism and energy services. The advancement of Information and Communication Technology (ICT) plays an important role, which push the boundary of supply of services ranging from construction to software development. An improvement of services brings multiple benefits, one being an increasing ratio of trade in services in national GDP and the overall competitiveness of economies. Additional benefits include enhancement of people's wellbeing through healthcare and education. Liberation of trade in services can generate high export earnings and increase employment, which in the long-run will reinforce regional competitiveness and encourage investment.

ASEAN Framework Agreement on Services or AFAS was signed in 1995 with the aim to liberalize trade in services. AFAS is a continuation of GATS provisions or also known as GATS-plus principle. This framework increased the importance of service sector in ASEAN, which contains measures such as improvement of efficiency and competitiveness, diversification of production capacity, widen the distribution of services and elimination of services trade restrictions. As AFAS is an extension of GATS, the rules are consistence with the international rules of trade in services. With regards to the AEC Blueprint, the free flow of services should first be applied to 4 priority services sectors. The removal of all restrictions of these 4 sectors must be completed by 2010 and the 5th priority sector by 2013. Deduction of restrictions for all other services sectors by 2015. Five priority sectors are 1. Air transport services; 2. E-ASEAN – infrastructure for Information and Communications Technology (ICT); 3. Healthcare; 4. Tourism; and 5. Logistic services. Other services are categorized according to WTO Services Sectorial Classification List, which can be found in www.wto.org[31]. In addition to sector categorization, AFAS has also distinguished modes of trade in services. Services are more difficult to define compared to trade in goods, as it is bound by time and proximity.[32] These Modes of Supply are[33]:

[29] ASEAN-5 refers to Indonesia, Malaysia, the Philippines, Singapore and Thailand. New members are Brunei Darussalam, Cambodia, Lao PDR and Vietnam.
[30] Masron T.A., 2013
[31] WTO, 1991
[32] The World Bank, Poverty Reduction and Economic Management Unit South Asia Region (2009)
[33] ASEAN Secretariat, 2015

Table 1 - Mode of Services Supply

Mode 1:	Cross-Border Supply (the service moves across borders)
Mode 2:	Consumption Abroad (service is received and consumed across border)
Mode 3:	Commercial Presence (producer supply service from abroad through commercial establishment)
Mode 4:	Movement of Natural Persons (producer move temporarily across border to supply service)

Negotiations on terms and measures for trades of services are organized into rounds starting from 1996 to 2015 and each round last for three years. Each negotiation rounds would conclude with packages of commitment agreed upon members. These packages include details of liberalization according to AFAS for service sectors. The commitments are made with these packages and reinforced by ASEAN protocols signed by the ASEAN Economic Ministers. As of 2015, there is a total of nine packages. Over years of negotiations, packages have been enhanced to tackle deeper level of commitment of members to eliminate restrictions of trades in services. Regarding foreign investors, it was scheduled that foreign and ASEAN equity participation for service sector is allowed up to 70%.

Relevance

The brief description of ASEAN and its frameworks above laid out a general idea of aims and purposes of this community. From this basis, there are convincing reasons to investigate the influence of ASEAN frameworks and policies on FDI inflow rate further.

The Political-Security Community can play a role in FDI decision of foreign investors. The framework encourages member states to resolve conflicts in a peaceful manner, which is important for foreign investors to estimate the political risk in the country. High national security and stability are topics of interest most of the times when investors are developing international strategies, because it allows the prediction and estimation of risk to be more accurate and thus easier to manage. Many political factors including political stability have significant influence in the flow of FDI, where the rate of FDI inflows and FDI performances can be measured.[34] On regional level, some national-specific factors may not be as significant, because interaction between countries is more important to the economy as a whole. Countries that are participant of WTO and preferential trade agreements are proven to have higher rate of FDI inflows.[35]

Social-socio community focuses on investing in people and social environment. With human development and social welfare and protection, the region can be attractive to investors seeking for skilled labor. Investment in education can help Southeast Asia to develop higher educated human resources suitable for the service sector. Enhancement and promotion of environmental sustainability

[34] Kim H., 2010
[35] Büthe T.; Milner H.V., 2008

can also attract foreign investors as this can help promote corporate social responsibility. The result of such activities is proven to increase and enhance firm's competitiveness and reputation.[36]

The most relevant ASEAN community for this thesis is the AEC where terms of trade in both goods and services will be the basis of the upcoming empirical research. Free trade area opens up endless possibilities for foreign investors to seize the advantages that free flow of trade has to offer. In combination with the AIA, the process of investing in this region should be an ease. The agreement to have more transparent investment environment lowers the potential additional transaction cost, which is a great contribution to cost of doing business abroad.[37] Several prominent factors come to mind when referring to transaction costs in international markets; differences in formal institutions, informal norms as well as information asymmetry and bounded rationality of employees.[38] Therefore, with a help of AIA guidelines and transparency regulations, foreign investors can be assured to a certain level, that unnecessary/misunderstanding costs will not incur. By establishing international branch office in the host country, such transaction costs can be largely avoided.[39]

In addition to AIA, AFTA and AFAS also act as an interesting attraction to foreign investors. Zero tariffs of import goods within ASEAN region should attract more manufacturers, which in return also attract complementary services. The liberalization of trade means more privatization and less of state-owned operations, which motivates investors to enter the market and seize the opportunity of open market.[40] Regional trade agreement not only attempts to integrate economies, but also political and social objectives. It is designed to help countries in the region to work together, decrease conflict in order to create a more stable environment for investment as a whole. Free trade agreements can however be a double-edged sword, for which it could potentially increase regional trade performance, but not each individual country would benefit it equally.[41] Free flow of goods may discourage some manufacturers to establish new production sites across the region, because minimal number of production sites may be sufficient to supply goods throughout the region[42], thus only benefitting countries with the winning manufacturing conditions. However, for services industry the situation may differ. The differences in norms and languages opens new unseized business territories, that foreign investors can tackle. Languages and traditions differ across Southeast Asia, which theoretically should be a perfect opportunity for service firms to establish multiple business sectors to widen operational activities while taking advantage of tariff free on different modes of service supply. *Table 1* states different ways to provide services in the region, which is a wide range of options for foreign investors to choose from.

[36] Orlitzky M.; Siegel D.S.; Waldman D.A., 2011
[37] Peng M.W., 2012
[38] Hennart J.F., 1998
[39] Williams B., 1997
[40] Ramasamy B.; Yeung M., 2010
[41] The World Bank, 2005
[42] Wacziarg R., 2001

The flexibility and convenience that AFTA and AFAS offer should be a powerful determinant of the increase in services FDI inflow rate and should deliver more pros than cons to invest in this region.

Elimination and reduction of tariff policies have been proven to have positive influence on FDI in developing economies. Investors from developed countries are attracted by reduction of trade restrictions, and investors from developing countries are attracted to fiscal incentives and lower tariffs.[43]A paper by Arbatli (2011, pg.17) came to a similar conclusion, though he did not distinguish between investment sources. The empirical research from this paper suggests that when tariff rates are lowered, FDI inflow will increase. However, it is also explained, that this effect is not large, where there must be a significant drop of tariff rates in order to slightly increase FDI inflow. For Sekkat & Veganzones-Varoudakis (2007), they found that trade openness, which in the research concentrates on trade liberalization and is measured by various indicators including tariff and non-tariff barriers below 40%, has positive effect on FDI level. This effect is prominent for countries in South Asia, as their FDI level would double if the level of trade openness is as high as East Asia or OECD countries. It is not to be disregarded, that the effect is only applied in combination with good investment climate; this accounts for political and economic development. Hence, this thesis will take these concerns into account and consider it in the regression model. Chakrabarti (2001) found that if his empirical findings had enough weight, country's openness (tariff not included) would have been more likely to be correlated to FDI compared to other variables such as wage, net exports, growth rates and tariffs. Pritchett (1996) emphasizes, that indicator of trade openness cannot be based on one trade policy variable, because one indicator cannot explain trade phenomenon of a nation/region. This encourages me to choose variation of indicators to depict investment and political environment, which will then carefully inserted into the regression to get a reliable conclusion.

1.4 Risk and Uncertainty

This section will be dedicated to defining risk and uncertainty – similarity and differences. In addition, international expansion risks will be explored in context of foreign direct investment (FDI) incorporating elements of service sector.

1.4.1 Definition of Risk

The world of uncertainty creates complexity in business environment. The ability to be aware and estimate outcome in the future is a great asset to possess. Forward-looking characteristics of management allow businesses to adapt to internal and external shocks that may incur in various business

[43] Banga R., 2003

spheres. The more accurate and further a business can predict trends and changes in the market, the higher possibility, that the operations can adapt adequately to strive against competitions. A difference between risk and uncertainty must therefore be identified in order for firms to tackle them appropriately. These two terms can have similar meaning at times, but it can generally be distinguished by the fact that risks are measurable uncertainty (quantifiable) and true uncertainties are non-quantitive.[44] For the purpose of this thesis, a more defined definition of risks and uncertainties will be explored for a better understanding of what is being researched.

According to Miller (1992) risks are referred to source of risk, both internal and external to the firm, that a firm experience and has impact on its performance. He refers these sources to such that of political and competitive risks. Sources of risks make up uncertain variables that make it difficult for firms to accurately predict its performance. Thus, it can be said, that uncertain variables are uncertainties that firms face. The term uncertainty can therefore, be well integrated to explain risks; uncertainties are the unpredictable variables and/or insufficient information on such variables that effect firm performance. The higher the uncertainty of both corporate and environmental variables, the higher the risk. With this association, Miller defines the term risk as "unpredictability in corporate outcome variables".

The concept of quantifiable uncertainty being referred as risk and unquantifiable as uncertainty has been proven and agreed among several researchers. The help of utility theory, researchers are able to conduct empirical research to confirm such theory. A further experiment has also been conducted, that attempts to weigh risk and uncertainty, which results show that people are less sensitive to uncertainty than risks.[45] Its relevance in economic level can be seen through uncertainty in stock market, interest rates volatility et cetera and how people behavior towards it. An article by Guerron-Quintana (2012) explains how risk and uncertainty play a role in economy. He defines uncertainty as a situation that a person cannot determine the likelihood of the event as well as situations where the outcome is unknown. As risk is measurable and dependent on person's perception and attitude towards risks, Quintana's description aligns with previously researches. The article depicts four measures of aggregate risks in economies; 1. Disagreement among forecasters; 2. Stock market; 3. Interest rate volatility; 4. Tax rate volatility. These measures are relevant for foreign investors interested in establishing foreign subsidiaries, which the following sections will go into more details.

1.4.2 Influence of Risks on FDI Decisions

Foreign direct investment can be beneficial in several ways for the host country, one being access to additional supply of capital, and another of acquiring new techniques, technology, skills and ideas. The high efficiency and productivity that foreign investments bring, can improve productivity of

[44] Knight F.H., 1921
[45] Tversky A.; Fox C.R., 1995

complementary resources in a country and eventually the economy overall.[46] These aspects are potential gains for host country to promote trade and foreign direct investment. However, what does this imply for the other end of equation, the investors?

Internationalization of firm refers to the attitude of firm desire to conduct activities abroad and also actually carrying out such activities.[47] The expansion done in hope of exploiting opportunities in foreign market. The decision for firms to internationalize and expand their operations abroad depend on multiple factors. As an organization has a system of its own, the skills and perspective of internal decision maker play a role in strategic expansion. On a larger scale, organizations are part of an industry system that combines all organizational characteristics within that industry as well as the environment the operations take place in. Therefore, one of the external element is uncertainty, where managerial bodies of firms try to implement control mechanism to avoid and reduce the impact of unexpected events. Where there is uncertainty, there is risk – in business context, it is the probability of loss a firm may encounter when such events occur.

An important risk international firms face is political risk, where is it unsure how the foreign government will behave and how the regulations will play out. Political risk may present international firms with fear of making losses in investment through political regimes such as expropriation, nationalization and war. Another element that effect internationalization decision is constraints in foreign market. Unlike uncertainty, constraint can be explored and access. In order to mitigate risk in foreign country, firms must study the market conditions to be able to estimate the risk appropriately and develop risk management strategies accordingly. This can be done by evaluating the general political environment, attitude of host country's government, possible concessions, legal system, market size and characteristics of the population. The knowledge about these factors in combination with firm-specific factors can give an idea of amount of risk a firm may possibly encounter, thus an appropriate strategy can be developed.[48]

Modes of market entry vary in level of risk and commitment. A high commitment mode such as direct investment comes with high risk and high uncertainty. The foreign environment volatility, disruptive changes and intrusive governmental actions contribute to uncertain variables and therefore increase risk level. On firm level, managerial positions can reduce the perception of high risk by gaining enough knowledge about different variables as well as international experience. This means market knowledge facilitates "uncertainty acclimatization" and risks can be dealt with through risk management, risk

[46] Penrose E.T., 1956
[47] Johanson J.; Widersheim-Paul F., 1975
[48] Aharoni Y., 1966

spreading and other mechanisms.[49] Investment commitment does not only refer to financial commitment, but also psychic and/or social investment.[50]

Entry modes for manufacturing goods and services may vary depending on firm's perception of risk that accounts for transaction cost, market environmental risk and trust propensity in the host market.[51] Transaction cost and exchange rate volatility is one of the reasons that firms should switch from exporting goods and services to establishing subsidiary abroad.[52] Evidence found by Brouthers & Brouthers (2003) determines that services firm's entry mode decision lies heavily on behavioral uncertainties, trust propensity and asset specificity. This is due to the nature of business where human interactions and reliance on human capital is intensive. Whereas for manufacturing goods, the environmental uncertainties play a greater role.

1.4.3 Risks of Internationalisation

Uncertainties in foreign market can be categorized into three levels; a) firm-specific; b) industry and c) general environment. At firm level, uncertainties are referred to operations, liability, credit and behavioral variables. Operational uncertainties may include production and labor uncertainties that effect the productivity and supply of goods. Credit uncertainty refers to complications with collectibles and payment of loans. Behavioral uncertainty is when it is difficult to predict managerial and/or employees' behavior. Difficulties arise when individuals in the firm is acting with self-interest and not aiming to achieve firm objectives. On a higher level, firms face different kinds of uncertainties; industry uncertainties. This level looks at the industry as a system with multiple firms as players. Therefore, uncertainties and conflicts between parties such as the competitive and input market uncertainties are inevitable. The technological race between firms can encourage rivalry, where innovative and disruptive changes in technology affect the unpredictability of amount of goods in the market. Input market looks at the unreliability of access to resources for production. Furthermore, the estimated demand forecast can also be a source of uncertainty on industry level. A sudden change in taste or consumer preference agitate firm's planned strategy and hence forcing them to adapt, which may incur additional costs. Input market and product market uncertainty are closely related to general environment of foreign country. The supply of raw materials or any other required input can be influenced by trade agreements between countries and regions, such as lack of defined regulations of multilateral trade agreement. General political instability of depending source of input is also another production uncertainty. Uncertain variables go beyond above-mentioned factors, as general environmental uncertainties include: political,

[49] Liesch P.W.; Welch L.S.; Buckley P.J., 2011
[50] Aharoni Y., 1966
[51] Brouthers K.D.; Brouthers L.E., 2003
[52] Kogut, B., Sea, J.C., 1996

government policy, macroeconomic, social and natural uncertainties.[53] In the following sections, uncertainties related to foreign direct investment in developing economy (ASEAN) will be examined.

Country risk

Country risk indices aid managerial personnel to make an appropriate and rational decision when expanding aboard especially in developing or unstable economies. Risk factors in host country help firms to evaluate the value of investment it should make as well as counter measures to ease the effect of such risks. As country risk has negative effect on firm's international investment, Nordal (2001) also refers to it as downside risk. The common country risk index, the International Country Risk Guide from The PRS group assorts risks into three subcategories for evaluation. These subcategories are political, financial and economic risks.[54] A scientific article by Palacios & Griffin (2011) has concluded that country risk have negative effect on inward FDI into developing economies such as Latin America and each risk type shows various degree of effects on the investment inflow. This thesis will use such categories as guidelines to form an empirical equation to further investigate the effect of risks on ASEAN services FDI inflow.

Political risk

Similar to country risk, political risks also have adverse effect on foreign business operations and investments. Negative outcome includes actual losses that firms encounter and opportunity losses that are limited by the government on foreign investments. Actual losses may be revolution or war, where opportunity losses incorporate hostile actions taken by external parties, such as nationalistic buyers, suppliers and other stakeholders. Therefore, political risks can originate from both internal and external political situations of host country.[55] The scope of political risk is not bounded to national government, as local, state and regional government also have impact on the investing area. Tax rules, trade restrictions and expropriation are examples of political instability arisen from various government types which contributes to volatility of business environment.[56]

An empirical research conducted by Agarwal & Feils (2007) determined political factors that FDI managers perceive as most important when deciding on FDI as mode of entry. They are ranked as following: Capital Outflow Restriction, Attitude of Host, Red Tape, Party Stability, and Regional/International Cooperation. Capital outflow restriction imply the level of host country's governmental intervention on foreign exchange reserves, which are results of economic difficulty and lobbying of pressure groups. Attitude of host country rank second on the importance. This refers to attitude that the host government has on foreign investment and trade, which can be an indicator for political risk, nationalism and level of government intervention. Third most important factor is degree

[53] Miller K.D., 1992
[54] The PRS Group, 2012
[55] Simon J.D., 1982
[56] Agarwal J.; Feils D., 2007

of red tape in host country government. This involves the complexity of operational rules and regulations as a result of political regime. This indicate a government's efficiency and effectiveness, which can go as far as corruption and bribery. The stability of political system is influenced by firm's level of tolerance to such acts, which determines level of political risk a firm can bear. Another empirical study also suggests that lower level of corruption, high level of transparency, and lower level of political risk result in higher inflow of FDI. [57] Role and quality of a country's institution is also influential to FDI decision especially propriety rights. Institutional stability and strength is most highly relevant to services industry compared to other sector of economy.[58]

Economic and Financial risk

Fluctuation in exchange rate is one of the variables international firms encouter, as this may change the value of the firm in the future as well as affecting the profit/revenue getting transferred back to home country. The severity of exchange rate movements unpredictability can be subsided by a good forecasting tool. For investments going into less developed economy, it is more important to analyze present-future movement of exchange rate than past-present variation.[59] Exchange rate uncertainty goes beyond firm-level effects, as it influences the stock market and therefore have wider spread than that of national economy alone.[60] Relatively, foreign investors are willing to make higher level of investment if the host country has lower economic policy uncertainty (EPU) than home country. The increase in EPU results in firms taking higher precaution and utilizing more financial instruments to hedge against such risks.[61] EPU was first introduced by Baker & Bloom & Davis (2016), where different keywords were searched for in newspaper articles and analyzed its relevance to world's economic situations. Though the researched was done for the United States market, it was concluded, that policy uncertainty has negative effect on investment and employment in policy-sensitive sectors. The main cause is due to the effect of policy uncertainty on volatility of stock price.

1.1.1 Risks and Determinants of Services FDI in Developing Economies

The shift in FDI investment into tertiary sector[62] and unique characteristics of services raise an interesting aspect for ASEAN as host region. The characteristics of services, intangibility and lack of storability, make foreign direct investment a more compatible mode of entry than other. The ability to provide services for host country's consumers promptly is crucial for service sector. Though foreign investors are somewhat affected by risks in developed host countries, such effects can be more severe

[57] Zhao J.H; Kim S.H.; Du J., 2003
[58] Ali F.A.; Fiess N.; MacDonald R., 2010
[59] Clare G.; Gang I.N., 2010
[60] Pan M.S.; Fok R.; Liu Y.A., 2007
[61] Nguyen Q.; Kim T.; Papanastassiou M., 2017
[62] Riedl A., 2010

in developing economies.[63] The operating environment in emerging and developing economies tend to be more volatile and prone to drastic changes. Numerous risks can be encountered in such economy; infrastructure, customer, banking, labor and political risks. Infrastructure risk is an important aspect for services firm, as this includes risk of power outage hindering online services and service delivery all together.[64]

Tomlin (2007) investigated the changes in rate of FDI from Japanese into U.S. service industries in relation to exchange rate uncertainty. The results are unconventional compared to manufacturing sector, as there tends to have higher FDI flows when dollar depreciates. Tomlin is convinced that the reason for this is the unique characteristics of services, that require firms to convert dollars to yen. As this article looks at two developed economies, we must stay critical that the result may not apply to developing economies such as ASEAN. Other research concludes that weaker exchange rate draws in more manufacturing FDI, but not necessary for services FDI. These inconclusive reasons encourage this thesis to take fluctuation of foreign exchange rates into consideration.

An example of services in banking sector shows that there is a strong pull effect ("follow the client") when companies from developed country invests in emerging economies. Factors that affect FDI rate of banking sector from developed to emerging markets include terms of FDI and financial market development, whereas income per-capita, country risk and sector openness are not as influential. Apart from macroeconomics indicator, sector-specific terms and regulations must be observed.[65] Riedl (2010) explored other motive for services FDI in transition countries, namely market-seeking motives. When compared between service and manufacturing sectors, price competitiveness and labor costs tend to be less of importance for service sector. Sector specific factors, degree of industrial concentration, low installation costs and location specific factors tend to be more significant for services FDI inflows. Though this conclusion can be made for markets in the eastern Europe, it can act as a guideline for this thesis and not necessarily applicable.

Kolstad & Villanger (2007) considered other aspects of services FDI motives. They conducted a research on determinants for services FDI in political economic sense. The research agrees with that of Riedl in terms of market-seeking, but Kolstad & Villanger determined that market size, democracy and institutional quality have effect on FDI flows. However, political risk, economic growth and inflation do not have significant influence on services FDI. Kolstad & Villanger categorized these effects to ascertain that democracy is a more important factor in the developing economies and political risk and institutional quality are more important for developed economies. Furthermore, their study shows that market-seeking is a great determinant for FDI in services, and trade openness of host country does not have any effect on such investment flows, which is agreed by empirical results from Ramasamy &

[63] Ramasamy B.; Yeung M., 2010
[64] Kwok C.Y.; Reeb D.M., 2000
[65] Wezel T., 2004

Yeung (2010). A contradicting research result by Kaliappan & Khamis & Ismail (2015) suggests that not only does trade openness have significant effect on services FDI, but also factors such as market size, human capital and infrastructure. However, this research came to the same conclusion as Kolstad & Villanger, that inflation (here used as proxy for economic stability) has negative but not significant to services FDI.

An empirical research conducted by Ang J.B (2008) identifies determinants of FDI in Malaysia. The results show that for financial services and financial system can expedite technological and innovative developments. Developed technology helps the economy to stay sustainable in the long run. The spill-over effect can also benefit the economy as a whole. For services industry, technological development is crucial especially in this era, where online services and online communications are integrated into every business. Furthermore, Ang observed that GDP growth, development of infrastructure (which increases productivity of capital) has a positive effect on inward services FDI. The effect of developed infrastructure on an increase in investment and decrease in cost of doing business abroad is concurred by Ramasamy & Yeung (2010) and Kaliappan & Khamis & Ismail (2015). The evidence from his empirical research concludes "greater liberalization of the trade sector may be conducive to inward FDI." (Ang J.B., page 188, 2008). The positive effect of economic growth measured by GDP on services FDI inflow is also confirmed by Ramasamy & Yeung (2010)

Part II

The second part of this thesis will be focusing on the empirical research. The integration of ASEAN policies and risks in doing business abroad will be explored by the means of collected quantitative panel datasets. I focus on the relationship between policies, macroeconomic indicators and FDI inflows into ASEAN.

2.1 Hypothesis

The ASEAN Framework Agreement on Services or AFAS aims to liberalize trade in services as well as free movement of natural persons that perform such services. The main tool to achieve trade liberalization in ASEAN is tariff reduction. Tariff rate and trade barriers have been addressed and emphasized throughout literature research in part one of this thesis. Therefore, it is only appropriate to explore this indicator further and see the level of influence on regional economic development. Although AFAS focuses on policy of tariff reduction on import services within ASEAN, services are closely related to manufactured goods and proven to have complementary effect[66]. For this reason, it is important to consider the relevance of tariff rates of all product categories. Furthermore, previous research have found that country's trade openness is also closely related to FDI growth, and some research have used tariff and non-tariff barriers as part of trade openness measurement. For this rationale, the hypothesis can be formed;

H_1 = Tariff reduction and trade openness in ASEAN attract more services FDI.

This hypothesis considers trade policy by using proxy of import tariffs elimination of all products. In addition, level of country's trade openness is included to cover other aspects of free trade other than tariff rates. The aim is to prove that there is a positive effect of tariff reduction and level of trade openness on the inflow of services FDI in this region. The literature research shows two distinctive results, where tariffs in combination with other economic policy factors shows positive effect, but tariff alone might not show significant results. Therefore, the indicator for trade openness is considered to cover wider range of definition for trade liberalization and integration. In depth definition of trade openness indicator used in this thesis will be explained in the following section. The statistic results will allow us to either reject or accept this hypothesis, for which further discussion and evaluation can be formed.

Although it is expected to have a negative relationship between tariffs and FDI as well as positive relationship between openness and FDI, the reliability of statistic output must be verified. A robust result

[66] Ramasamy B.; Yeung M., 2010

will have higher explanatory power and therefore making tariffs and trade openness reliable predictor for services FDI inflow for ASEAN Member States.

The statistic results for the hypothesis will be tested with chosen control variables in form of risk indicators. They are categorized into three groups; investment environment indicators, political environment indicators and general economic situation indicators. More detailed definition and relevance can be found in the upcoming sections.

2.2 Methodology

This section contains three sub-sections explaining variable selection, development of regression model and testing procedures.

2.2.1 Variables

In order to analyze free trade policies and risks in ASEAN, variables must be chosen appropriately. This section will be dedicated to variable selection. Table below lists out dependent and independent variables as well as addition control variables.

Table 2 - Regression Model Variables

Dependent variable	
Services FDI Inflow in $million	SFDI
Independent variables	
Tariff rate of all products	TRPR
Trade (in Services) Openness	OPNS
Control variables	
Category I – Investment Environment	
Economic Policy Uncertainty *Bureaucracy Quality*	ECPU
Investment Restrictions *Investment Profile*	INVR
Category II – Political Environment	
Government Stability	GOVS
Corruption	CORR
Democracy *Democratic Accountability*	DEMO
Category III – Macroeconomics Indicators	
Trade in Manufacturing Growth Rate	TDGR

Exchange Rate	EXRT
GDP Growth Rate	GDPGR
Inflation Rate *Consumer price index*	INFR

The dependent variable is the inflow rate of services FDI (SFDI) into ASEAN in unit of million U.S. dollars. The number consists of several kinds of services determined by ASEAN. They are the following: water supply and waste management, construction, wholesale and retail trade, transportation and storage, accommodation and food services, information and communication, financial and insurance activities, real estate, professional (scientific and technical) activities, administrative and support services, public administration and defense, education, human health and social work, arts and entertainment as well as other services activities that cannot be categorized. The data let us estimate growth (decline) trend in services FDI. This dataset is ranging from 2000 to 2016 for all ten Member States.

The first independent variable is tariff rate on goods and services (TRPR). The rate is unweighted simple mean of applied tariff rate on all products. The tariff line data is adjusted according to the Standard International Trade Classifications. The applied tariff rate is used instead of the most favored rate, because it gives the quantitative test a more realistic picture, though when data on applied tariff is unavailable, it is replaced by the most favored nation rate. This discrepancy in dataset is noted. The expected result is a negative correlation between tariff rate of all products and inward services FDI rate – the lower the tariffs, the higher the FDI inflow rate. Although the result could be more accurate with the progression of tariff elimination of only services, the service activities are still heavily bounded to other production and manufacturing activities. Therefore, at the current status of ASEAN integration, it makes sense to include tariff rates of all products. In addition to this reason, the ASEAN organization does not have sufficient data on tariff elimination rate of all Member States and utilizing dataset with missing data points will not be feasible.

Another predictor of ASEAN services FDI inflow will be level of trade openness (OPNS) in service sector. This measures how much of GDP are services traded in each country, meaning it is measured by the ratio between export and import of services to GDP of each nation. This is chosen as another predictor in combination to tariff rates because of reasons stated above, where researchers have found a positive evidence of trade openness on FDI and that it is closely relevant to how tariff policies are imbedded and contribute to country's trade openness. The compound of these two variables should give a significant result with high predictive capability.

Control Variables

Control variables in categories I and II are in form of risk indicators. This is to control the robustness of variables of interest, namely TRPR and OPNS. Control variables will help us to ascertain the relationship between variables of interest and SFDI.

First set of control variables deals with investment environment. This is to test the relationship of TRPR and OPNS on FDI when investment environment indicators come into play. As it is not uncommon for investors to investigate host country's investment policies and situation. Economic policy uncertainty (ECPU) is proxied by bureaucracy quality. The bureaucracy quality refers to the influence of change in government on the stability of policy changes. Policies of a country with high bureaucracy quality will not be interrupted or drastically disturbed as a result of change in the government. The higher the quality presents higher strength and expertise of bureaucracy to govern in a nation. This variable is chosen due to the fact that ASEAN policies highly influence each nation's internal policies. It is important to identify the strength of each countries' bureaucracy and how they react to changes in regional policies. Strength of bureaucracy creates safer investment environment, which can be seen as a more stable environment for foreign investors.[67] Next control variable aims to represent investment restrictions for foreign investors. This is proxied by investment profile (INVR). The investment profile looks at risks involved in investment that are not part of political, economic and financial risks. The profile is assessed with the following components; contract expropriation, profits repatriation and payment delays, presenting the risks and difficulties investors may encounter when striking a contract with international partners as well as transferring financial assets back to home country. A highly evaluated investment profile means low risk of the mentioned components.

Next three control variables are rather closely related to governmental uncertainties. Third control variable is government stability (GOVS), where nation's government performance and ability to stay in service are evaluated. This assessment takes three components into consideration; governmental unity, legislative strength and popular support. This variable is chosen because instability of national government can act as threats to foreign investors because they are exposed to more uncertainties and unpredictable behavior of country's authority. Fourth variable is corruption (CORR), which is measured by the perception index of corruption. It is the perceived evaluation of the public sector by experts and business people. The ranking represents how much of the public power is abused and misused for personal gain. A less corrupted country should be viewed as a stable country and therefore attract more foreign investors. Countries scoring high points are considered to be less corrupt than those with lower scoring. Fifth variable is democratic accountability (DEMO), which measures the responsiveness of a government to its people. Countries are ranked and categorized into different forms of government; ones highly scored are categorized as "Alternating Democracies" meaning the country has lower risk of its

[67] Hayakawa K., Kimura F., Lee H.H., 2013

government not responding to its people's needs and thus lower risk of fall of government. At the other end of spectrum are countries with autarchy government regime, where it is governed by a single group or person, thus not giving its people power to choose.

The last set of control variables comprise of general macroeconomic indicators, which do not represent uncertainties, but general condition of countries. Sixth control variable is growth rate of trade in merchandises (TRGR). This assesses the balance of trade – import and export of merchandises. As mentioned earlier, that trade in manufacturing goods have high impact on trade of services. Seventh control variable is fluctuation in exchange rate (EXRT). This is a comparison of one unit of host country currency to U.S. dollars to see if the value of host country money has any relevance to foreign investments. Eighth indicator is the GDP growth rate (GDPGR), so that the model is controlled by the economic growth of each nation. Last variable is the inflation rate (INFR), which is measured by consumer price index.

2.2.2 Data Sources

This section documents all the sources of datasets used in this quantitative analysis. Table below lists out all the variables and their sources.

Table 3 - Data Sources

Services FDI Inflow Rate	ASEANStats
Tariff rate of all products	The World Bank
Trade (in Services) Openness	UNCTAD
Economic Policy Uncertainty *Bureaucracy Quality*	The PRS Group 2018
Investment Restrictions *Investment Profile*	The PRS Group 2018
Government Stability	The PRS Group 2018
Corruption	Transparency International
Democracy *Democratic Accountability*	The PRS Group 2018
Trade in Manufacturing Growth Rate	UNCTAD
Exchange Rate	UNCTAD
GDP Growth Rate	UNCTAD
Inflation Rate *Consumer price index*	UNCTAD

Inflow rate of services FDI to ASEAN countries are from the ASEANStats of ASEAN community. The initial intention of doing analysis since the beginning of free trade agreement signing in 1995 could not be done, because a breakdown by sector of FDI data from 1995-1999 is not available. As the availability of data is limited to years 2000 to 2016, this allows the analysis to be conducted within this period.

Tariff rate of all products are from The World Bank. Though the initial intention is to use tariff rate of only services, this data is not available throughout various sources.

Macroeconomic indicators are taken from UNCTAD, because datasets are available for all years. The variables used are trade openness, growth rate of merchandise trade, exchange rate, GDP growth rate and consumer price index. Corruption perception index is taken from the Transparency International. Though some data points are missing for some ASEAN countries, it has the most complete dataset compared to other sources. Risk indicators including bureaucracy quality, investment profile, government stability and democratic accountability are taken from the International Country Risk Guide 2018 assessed by The PRS group Inc. These four indicators are part of the Political Risk assessment of ICRG (Table 3B), where other indicators in financial (Table 4B) and economic (Table 5B) risk are not included in this analysis. Although some of the risk indicators in Table 4B and 5B could be significant to FDI inflow, the focus of this thesis lies within political and policy risks covered by Table 3B.

2.2.3 Regression Modelling

The baseline regression model is regressing of SFDI on tariff rates and trade openness. The regression model is presented in equation (I) below:

$$SFDI_{it} = \alpha + \beta_1 TRPR_{it} + \beta_2 OPNS_{it} + \varepsilon_{it} \quad \text{(I)}$$

This equation will be first tested for the ASEAN region and then for every Member States individually. In equation (I), α denotes regression intercept, β as estimated parameters, ε as error term for all i countries and t period. From this equation we want to see the relationship of TRPR and OPNS with SFDI. The β estimator will tell us whether TRPR and OPNS have positive or negative association with SFDI. The level of statistical significance will be observed through p-values of both variables. This thesis will allow statistical significance level up to 10%, because of two folds. One being size of datasets and two, the main objective is to observe relationship even with weak evidences, it will be sufficient to form a conclusion. Moreover, for individual countries, F-test will be tested before proceeding with other regression experiments. As number of observations will be significantly smaller than total ASEAN, there is a high possibility that the results will not be significant.

Following test of equation (I), control variables will be added to further examine effects on SFDI. Though the control variables are not expected to influence the relationship between TRPR and OPNS on FDI inflow rate, it must be taken into consideration. This allows us to test the divergent of empirical results done by other researchers regarding determinants of foreign direct investment.

The regression model containing all the variables is as following:

$$SFDI_{it} = \alpha + \beta_1 TRPR_{it} + \beta_2 OPNS_{it} + \beta_3 ECPU_{it} + \beta_4 INVR_{it} + \beta_5 GOVS_{it} + \beta_6 CORR_{it} + \beta_7 DEMO_{it} + \beta_8 TDGR_{it} + \beta_9 EXRT_{it} + \beta_{10} GDPGR_{it} + \beta_{11} INFR_{it} + \varepsilon_{it}$$

(II)

Equation (II) is built from equation (I) inclusive of all control variables. Term α denotes intercept of the regression. Term β_j are estimated parameter; i representing each country and t time period, which in this thesis translates to year 2000 to 2016. The last term ε denotes error term for all countries throughout the determine time period.

2.2.4 Technical Procedures

Quantitative analysis of linear regression will be performed by statistical computing program, R. Prior to any tests, all datasets are cleaned up in order to ease the data importing process into the program. Each dataset contains data points for each variable (dependent and independent) of all countries for years 2000-20016. There datasets are then adjusted in R, so that country and year columns are considered as factors, which allows the program to merge all datasets into one resulting in a complete set of data points forming a panel data dataset crucial for the analysis. This complete set is the main dataset with all variables for all countries and years. The analysis of ASEAN will be based on this complete dataset. Analysis of individual member states will be from subset data of this complete set. Hence, there are total of 10 subsets, with each presenting each ASEAN Member States. Each subset contains data for dependent, independent and control variables for all years. Country names are abbreviated according to the ISO3 standard:

Table 4 - Country Code

Brunei Darussalam	BRN
Cambodia	KHM
Indonesia	IDN
Lao PDR	LAO
Malaysia	MYS
Myanmar	MMR
Philippines	PHL
Singapore	SGP
Thailand	THA
Vietnam	VNM

Data Structure

Data structure of datasets are examined before conducting analyses. A general correlation test is checked to give us a general idea of which variables are correlated and whether they have statistically significant effects to each other. Analysis of ASEAN will be more in-depth than those for individual countries.

The simplest form to observe data structure is density plot. This is done for FDI, TRPR and OPNS by using R library '`lattice`'. Additional correlation test for these main variables is done with Pearson's Correlation test. The correlation can also be viewed in a graphical presentation. The analysis of density plots, correlation test and correlation plots for ASEAN can be found in Section 2.4.1. For the rest of the chosen variables, a general correlation test is performed by producing correlation matrix with '`Hmisc`' library by running '`rcorr`' command.

Panel Data Analysis and Robustness

Unlike regular time-series or cross-section regression, our complete dataset for ASEAN deals with panel data. This varies in both indices of country and time.[68] As linear model regression is needed to run regression for this thesis, the '`plm`' library comes in handy. Panel data estimator allows us to run linear panel model on the transformed data. This adjusts the data so that it is taking data points per county over a period of time, instead of treating each observation as independent. The choice of estimation model for ASEAN dataset will be tested with F-Test ('`pFtest`') by comparing fixed-effect model to ordinary least squares (OLS) model. To see relationship of TRPR and OPNS on FDI for individual countries, F-test will first be conducted to see the feasibility of the small number of observations. The OLS model will be tested with the help of year dummy variables to account for time variant unobserved heterogeneity.[69] Year dummy variables are generated with '`dummies`' package.

The following analysis incorporates control variables to test robustness of TRPR and OPNS in relation to FDI. The baseline regression is focused on ASEAN as a region, as this is expected to give more credible results due to number of observations available. For ASEAN dataset, we will continue to use panel data estimator to test the robustness by adding control variables into the regression model. First, category of variables according to *Table 2* will be added separately. This is to test if indicators of each chosen category influence the relationship of main variables. The result will give the general idea of which category has higher impact and hence giving a better estimation of which variables could be influential to TRPR and OPNS relationship to FDI. From this, we can further test each variable independently, by adding one at a time to equation (I).

The limited number of observations for individual country creates doubt of result validity. Therefore, testing control variables on country level will depend on each country's F-tests of equation (I). The robustness of variables' explanatory power will be tested with the '`ExtremeBounds`' package, using

[68] Baltagi B., 2012
[69] Wooldrige J.M., 2012, page 460.

'eba' command. Extreme bounds R package is developed from two robustness theories, namely Leamer's EBA and Sala-i-Martin's EBA. A thorough research done by Hlavac (2016) states that EBA is used in different fields of research including economists, political scientists and social scientists. Specifically, EBA has already been utilized in empirical research of foreign direct investment of Moosa and Cardak (2006). Chanegriha & Stewart & Tsoukis (2017) tested robustness of FDI determinants with panel data of 168 countries between 1970 and 2006. Hassain & Brookins (2001) conducted extreme-bounds analysis on determinants of national-savings. Furthermore, in the area of social science, Kim (2007) examined determinants of labor market institutions, also with panel data. For the purpose of a better understanding of extreme bounds package, the theory where is it derived from, will be shortly explained.

Going back to the research of Hlavac (2016), he has explained the theories of Leamer's EBA and Sala-i-Martin's EBA decently. Since the initial intention, the purpose of extreme bounds analysis is to investigate the robustness of independent variables' association to dependent variables. The analysis is made up for dependent variable $\boldsymbol{y}$, set of explanatory/doubtful variables $\boldsymbol{X}$, and subset of $\boldsymbol{X}$ of free and focus variables. Doubtful variables are the main focus of EBA, as the statistical significance of their regression coefficients are weighted and would then be marked as either robust or fragile. Free variables are variables that are present in all regression calculation and focus variables are variables that are most interested for the research findings. Leamer and Sala-i-Martin have slightly different evaluation categories of whether such doubtful variables are robust or fragile. Leamer's EBA concentrates only on the extreme bounds of coefficients at a predetermined confidence level, where if all coefficients of a variable from all combinations of regressions have the same sign, that doubtful variable is considered as robust. This means, that if one of the coefficients of a variable result in an opposite sign, this variable would be considered as fragile. Sala-i-Martin's EBA approach builds from this idea of robustness testing. In contrast to Leamer, Sala-i-Martin approach is taking the whole distribution of regression coefficient with specific confidence level. These regression coefficients are then weighted, forming cumulative distribution function of CDF(0). This determines if a variable has robust association to dependent variable. If majority of regression coefficient falls on the same side of zero (negative or positive), that variable is considered as robust. In addition to CDF(0), Sala-i-Martin distinguish between normal and generic model, where normal model assumes that the coefficients are normally distributed and generic model does not assume any particular form of coefficient distribution.

For this thesis, extreme bounds analysis will be used to run addition robustness test of results from country level. For the reason that extreme bounds analysis is at default testing robustness of linear model with ordinary least squares model, it is not appropriate to use it with panel data. EBA will take FDI as dependent $\boldsymbol{y}$ variable; depending on the outcome of initial EBA variable test, a free variable will be chosen; focus variable will be TRPR and the rest of control variables are doubtful variables.

2.4 Results and Analysis

This section will be presenting statistical results and analysis. First part will cover the analysis of the total dataset, which includes combination of data points for all ten Member States of ASEAN. Second part will individually look at each country, in which tests of hypotheses are to be expected.

2.4.1 Total ASEAN Dataset

Prior to empirical analysis and regression model evaluation, general observation of the data is necessary. This helps to understand the structure of each data sets to better evaluate later results. The first graphical representation of main data points; amount of FDI in million US dollars and tariff rates of all products are generated. These plotted data points are for the period of 2000-2016 of all ASEAN Member States. With the help of R, density plots of such variables are presented in *Figure 7*. On the left-hand side, *Fig. 7a* shows that most of FDI lies within the value of zero to 10,000 million U.S. dollars. Though the mean is $4,748.50 million, the median is only at $1,011.20 million. The data ranges from negative values all the way to above $80,000 million. The substantial difference points to the fact that each Member States do not have equal investment values for foreign investors. The overall interpretation of this density plot is that ASEAN is still a developing group of economies, but it has potential to strive by taking the top player in its region as economic model. The other density (*Fig. 7b*) is plot of tariff rates for all products; manufacturing and services trade. Compared to FDI density plot, tariff rates plot is similarly skewed to the left but not as prominent. Though ASEAN policies are encouraging members to eliminate intra-ASEAN import tariffs, not all country are able to impose such policies on all of its goods and services. The average tariff rate is 6.67% with median of 5.66%. The lowest rate is zero, for which all of them belong to Singapore, having successfully eliminated all tariffs. Trade openness indicator is measured by the percentage of international trade from gross domestic product.[70] Data for trade openness in ASEAN is oddly distributed, where data are cluttered in two places; approximately 0-20% and 40-60%. The minimum is 1.04%, maximum is 52.39%, giving the mean of 12.46%. This points out, there is a diversity of economic openness in ASEAN. Trade policies and international trade activities are vastly different, thus showing in *Fig. 7c* as unbalanced. According to group of countries with high and lower economic level, this unbalance of trade openness level aligns with such categorization.

From these density plots, we can better understand the structure of the main variables. The skewness in data structure is may be due to unequal distribution of economies and level of tariff rates, which are visible through extreme values plotted in *Figure 7*. The density plot distributions are rather consistent in this figure with higher density on the farther left side of graphs, but existence of scarce evidence in

[70] UNCTADSTAT, 2016

the higher value. Though left-skewed plots of FDI and OPNS is not desirable for future economic development, this distribution for TRPR is enticing.

Figure 7 - Density Plot of Main Variables

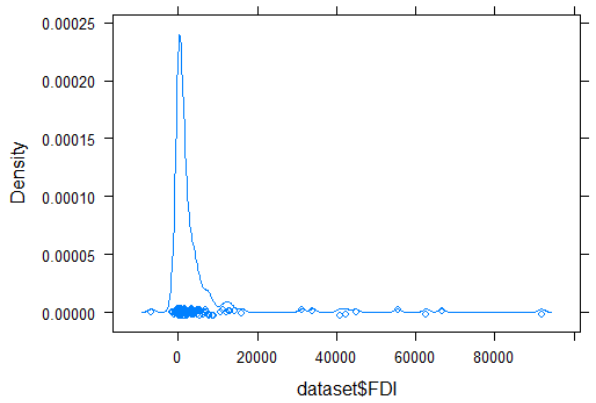


Fig. 7a - FDI

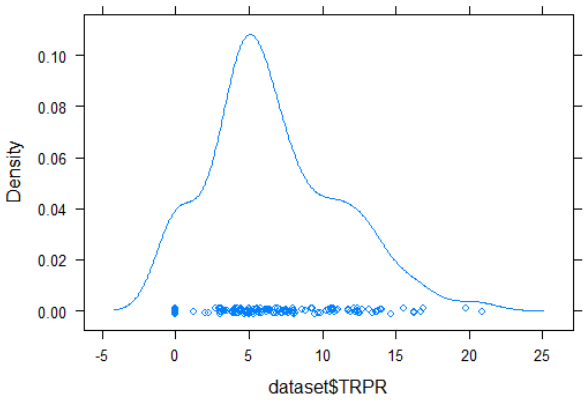


Fig. 7b - TRPR

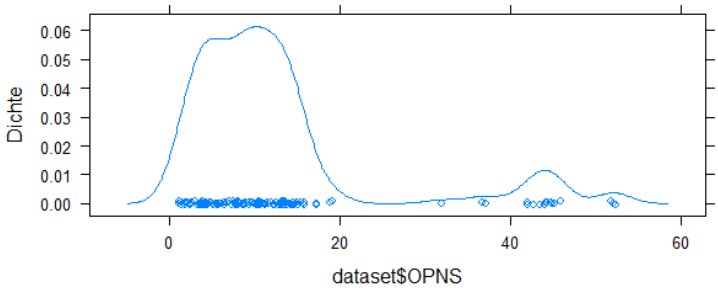


Fig. 7c - OPNS

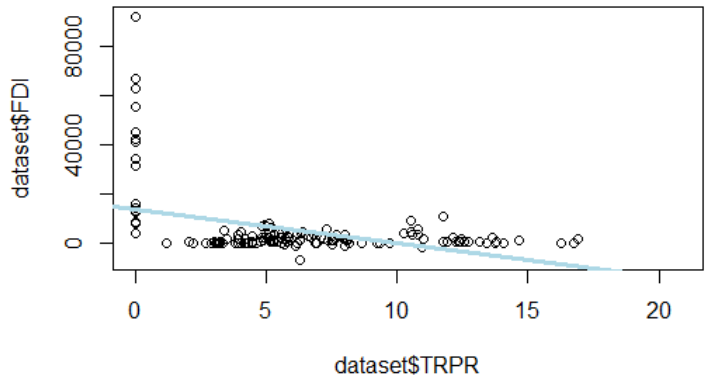
Source: Own Graphic produced from R

Before diving into regression models, a correlation tests and correlation matrixes are conducted. Correlation matrix in the Appendix A shows correlation of each variables to one another. For the purpose of testing our hypotheses, only correlations within the marked area will be assessed. The correlation between FDI inflow value and other independent variables are presented within the marked area. The decimals represent the correlation and red asterisks represent statistical significant levels. The highest acceptable alpha for this thesis is 0.1, therefore out of 10 independent variables, FDI inflow has significant correlation with seven of them; six being positive and one negative, namely the tariff rates of all products. The other four; democratic accountability, GDP growth rate, government stability and inflation rate do not show significant correlation with the total FDI. Variables that show correlation with FDI inflow with statically significance level lower than 5% exhibits only moderate level of correlation. The positive correlations range from 0.41 to 0.76 and negative correlation at -0.42. The correlations are as expected from the hypothesis, where less business environment uncertainties, higher country stability

and lower tariff rates corresponds to higher inward FDI. However, we must at this point remain critical as these correlations only account for interactions of bilateral relationship of independent and dependent variables.

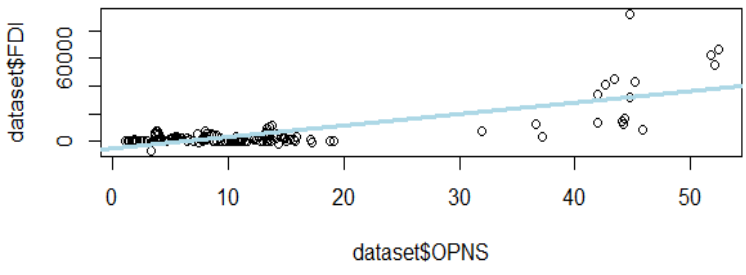
Figure 8 below plots data points of FDI and tariff rates. The correlation is negative (-0.42) with high significance. The data points are heavily located at tariff rate equal zero as well as at the proximity of 5%. Singapore is responsible for tariff rate of zero, as it is the only country that has achieved tariffs elimination. Other member states have not reached such milestone, but made a great achievement of averaging tariff rate at 5.66%. At zero tariff rate, amount of FDI ranges from low thousands up to over $80,000 million. Value of FDI does not exceed $20,000 million for tariff rates greater than zero up until 20%.

Figure 8 - Linear Model of Foreign Direct Investment vs. Tariff Rates



Relationship of foreign direct investment and trade openness is also plotted in *Figure 9*. The correlation between FDI and OPNS is significant positive (0.7643) after Pearson's correlation test. This shows a positive trend between trade openness and ASEAN services FDI rate. In general, there is a clutter at lower level of trade openness compared to values greater than 30%. It is to be noticed, that there is a large gap between 20% and 30%, which could be due to different level of international import and export of Member States.

Figure 9 - Linear Model of Foreign Direct Investment vs. Trade Openness



Linear regression lines above *Figure 8* and *Figure 9* present expected relationship to foreign direct investment. However, as these regressions were calculated with ordinary linear model ('`lm`'), the reliability is not guaranteed. In order to observe relationship of TRPR and OPNS on services FDI for the total ASEAN, the panel data estimator is used. Panel data estimator allows us to determine the association of independent variables on dependent variable more precisely with higher statistical accuracy. A dataframe for panel data estimator is first prepared, where countries and years are considered as indices. The '`pvar`' command is ran to check cross-sectional and time variation.

Next task checks the type of model best to run the regression. F-test for panel linear regression between '`within`' and '`pooling`' is examined. The model 'within' or within transformation is regression with fixed effects eliminating time-demeaned data. This assist the regression calculation to result in a more accurate association of dependent and independent variables. This model removes unobserved variable bias that might affect the relationship other than chosen variables. Moreover, it considers the changes and relationship of data points within each country and not treating each data point (across country and time variation) as individual information. This is therefore more likely to give a precise result of changes in each country as well as higher chance of variables being correlated. The 'pooling' model or pooled OLS model does not account for unobserved variables, which can coerce the outcome of cross-sectional and time-series data. The F-test of panel estimator's null hypothesis states that pooling model is a better fit for the regression than within model. Test ran with command '`pFtest`' successfully rejected this hypothesis, thus is the within/fixed effects model selected for this analysis.

The first panel data estimator tested is for relationship between FDI and TRPR as well as FDI and OPNS separately. The result shows that tariff rates of all products have negative association to services FDI in ASEAN, though this is not statistical significant. On the other hand, trade openness has positive significant association to services FDI. The value of SFDI is expected to increase by $1790.59 million as one percent of trade openness increases. This conclusion remains consistent when SFDI is regressed on both tariff rate and level of trade openness. Although the combination of two independent variables result in expected sign (negative) of TRPR coefficient, it is not significant. Level of trade openness persists to have positively significant relation to services FDI. In addition, when combining TRPR and OPNS, one unit increase in trade openness indicator, increase services FDI by $1896.15 million, approximately $100 million higher than individual effect. Full output can be viewed in Appendix B.

To control for investment environment risks, indicators for economic policy uncertainty (ECPU) and investment restrictions (INVR) are added to the panel data estimator. These variables do not show significant relationship to services FDI. They also do not impact the relationship of trade openness and FDI and continues to be positively significant. Interestingly, the interaction of main variables with this group of control variables influence TRPR to have negative and slight significance relationship to FDI (-947.16, p-value = 0.0914).

Political environment indicators, which include government stability, corruption and democracy, do not have impact on behavior of TRPR and OPNS on FDI when compared to baseline regression. Tariff rates have negative but insignificant relationship, whereas trade openness has positive significant beta-coefficient.

The last category of control variables is macroeconomic indicators; growth rate of trade in manufacture, GDP growth, exchange rate and inflation rate. Their contribution to the linear model do not influence the regression result of main variables either. Though it is to be noted, that exchange rate has a positive significant contribution in relation to FDI rate. For the selected dataset, exchange rate is measured by U.S. dollars per one local currency, therefore implying that as U.S. dollars appreciates, services FDI in ASEAN increases. This is plausible, because foreign investors would need less capital, when converted to home currency (U.S. dollars), to invest in host countries in ASEAN. However, this indicator does not account for investments from different source with other currencies.

The next robustness test is to add control variable categories accumulatively. Investment and political environment variables do not change the effect we see above, nor when macroeconomic indicators are added. The overall result leans towards a robust relationship between tariff and trade openness on services FDI. The current result status is that tariff have negative but insignificant relationship to FDI, whereas trade openness has positive and significant association. To be more specific and certain on this outcome, individual control variables are added one by one.

When control variables are introduced one by one accumulatively, the relationship of main variables remain the same. A few variables show significant relationship to FDI, but not with expected coefficient signs. There is also inconsistency of p-values because they increase as more variables are added to the equation. One variable that stands out is EXRT. Though it does not change the interaction between main variables, exchange rate presents a positive significant association to services FDI throughout the test. In the control variables accumulation test, EXRT was part of the macroeconomics indicator, which was introduced later to the panel data estimator. Due to the consistent outcome when it is added individually, it encouraged me to experiment with the equation by adding it earlier on. To the regression, this would mean that EXRT is the first control variable that stays in all other robustness test equation. The same association of positive significant remains throughout the test. From this robustness test, we can see that OPNS and EXRT have positive significant association to FDI. Although, TRPR have negative coefficient, it is not significant. Alternative indicators and control variables do not have effect on baseline result.

The overall effect of TRPR and OPNS on services FDI inflow is somewhat satisfactory. The main objective of this thesis is to see if tariff rate reduction, as part of ASEAN free trade policy, have association with services FDI inflow rate. In addition, the level of trade openness of this region is also another focus point. The result from panel data estimator concludes, that tariff rates of all products in ASEAN Member States have negative influence, but this is not to say with statistical significance. In

the contrary, level of trade openness in such countries have positive influence with statistical significance. It is conceivable, that foreign investors to not merely observe tariff trends in ASEAN as the decision maker for their investment. Trade openness is a better indicator and determinant for services foreign direct investment. Country's level of international trade and being open to import and export foreign goods and services tend to be more compelling than tariff rates alone. Furthermore, exchange rate appears to be positively significant to services FDI. As host (ASEAN) countries' currencies depreciate, foreign investors tend to increase their investment into services industry. Currency depreciation of ASEAN allow foreign investors (when calculated with U.S. dollars) to bring in more capital, as it is "cheaper" in such situation. The robustness of these three variables (TRPR, OPNS and EXRT) were tested and their association and statistical significance do not vary as additional control variables are introduced. This allows us to form a credible conclusion.

2.4.2 – Country Breakdown

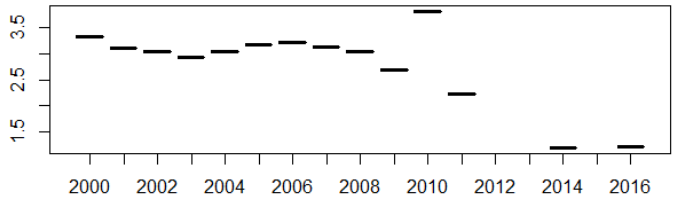
This part contains country level analysis of Member States. Firstly, data structure and correlation of main variables per country will be examined. The aim is to explore country data in more detail to understand the current (2016) status of both services foreign direct investment rate as well as tariff policy and level of trade openness by country. Section thereafter will explore the relationship of main independent variables on FDI, which will be conducted by running linear model regression with the help of robustness testing of extreme bounds analysis.

2.4.2.1 Data Structure

Brunei Darussalam

FDI inflow of Brunei Darussalam covers a wide range of value. The minimum of $2.09 million and maximum of $586.31 million in value averaging at $89.26 million. Brunei Darussalam is achieving tariff elimination shown by minimum tariff rate of 1.20% and averaging at 2.80% for all products, see Figure *10*. Level of trade openness of Brunei Darussalam is 13.39%, which is above ASEAN average. The correlation test between FDI inflow and other variables did not show high level of statistical significance. Services FDI inflow does not show any correlation with tariff rates nor level of trade openness in Brunei Darussalam. However, there is a statistical significance correlation between FDI inflow and inflation rate measured by consumer price index, where the correlation is negative (-0.67) with p-value of 0.0034. The correlation between FDI and other variables are insignificant.

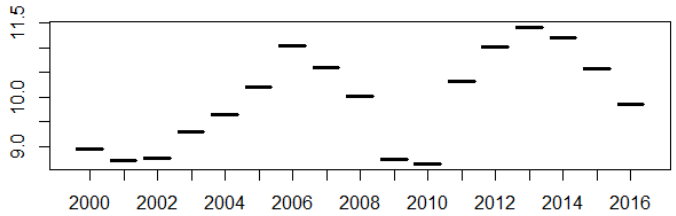
Figure 10 - Brunei Darussalam Tariff



Cambodia

Dataset for Cambodia is somewhat sparse, because data points for some variables are not available. In total, Cambodia only has seven control variables out of ten. Missing variables are ECPU, DEMO, GOVS and INVR. Nonetheless, we must stay skeptical and analyze available data. Being part of the CLMV group, Cambodia does not have high services FDI value. It ranges from $43.53 to $1640.93 million, which is however still larger than that of Brunei Darussalam. This has the mean of $466.02 million. Regarding tariff rate, Cambodia has achieved to reduce it to 8.04% minimum with prior rate of 16.74%, however the mean remains high at 13.35%. The extreme FDI value at 12% tariff rate is unusual for Cambodian FDI trend and this could be the result of other factors, either political, economic or country environmental changes at certain point in time. The trade status is however still underdeveloped, because the average level of trade openness lies approximately at 9.94%. The level of openness is unstable, and can be seen in Figure *11* below, where there is periodic fluctuation. This instability could be considered as potential threat to any investment. The correlation matrix produced from R determines, that FDI level in Cambodia is correlated to TDGR and TRPR with statistical significance. For other variables, there is no significant correlation with inward services FDI.

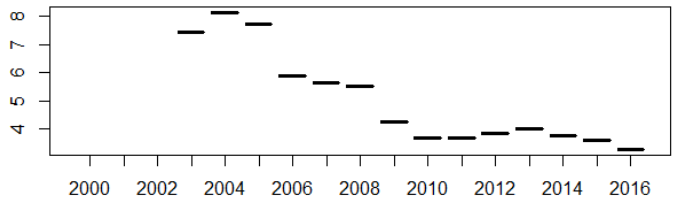
Figure 11 - Cambodia Trade Openness



Indonesia

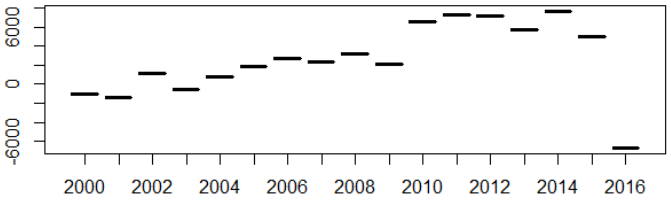
Dataset for Indonesia is fairly complete. Value of Indonesian services FDI goes as low as negative $6678.80 million to the highest of $7628.80 million. The negative value indicates that the investment outflow exceeds capital inflow. This may be due to the new Negative Investment List of Indonesia which list fields of business that are closed to investment as well as fields that are open to investment under certain conditions. The conditions, depending on business type, include limited foreign capital participation, certain location, special licenses, 100% domestic capital and limited capital ownership according to ASEAN.[71] These conditions may be hard for some Indonesian investors to meet, therefore might encourage them to invest abroad. Consequently, Indonesian investors must see foreign markets as an opportunity to expand their business operations, thus will to invest more (capital outflow) in foreign countries than domestically. Regarding tariff rates, Indonesia has not yet achieved the elimination goal set by ASEAN community, though they have reduced it from 14.01% to as low as 4.86%. This averages at 6.76% for all products. Trade openness averages at 5.03%, which is unexpectedly much lower than Cambodia. Figure *12* graphically shows the decline in Indonesia's trade openness over the past decade. Due to changes in policy making process and lag in regulatory development, Indonesia has been struggling with international trade as well as attracting foreign investments.[72] However, Figure *13* contradicts this statement. Over the decade, Indonesian services FDI has been increasing despite the decrease in trade openness and a stable rate (approximately 6%) of tariff rate. In addition to this, it also contradicts the panel data result, that trade openness having positive influence on services FDI. Apparently, result of entire ASEAN region does not necessarily apply to every individual country, seen here for Indonesia.

Figure 12 - Indonesia Trade Openness



[71] Presidential Regulation of the Republic of Indonesia, 2016
[72] OECD, 2012. Page 56

Figure 13 - Indonesia Services Foreign Direct Investment

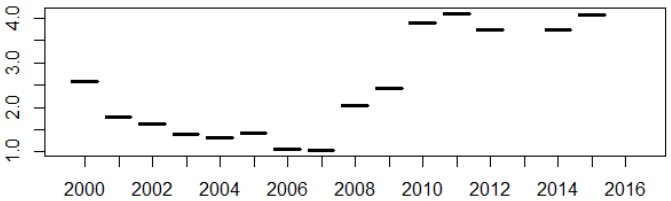


The correlation matrix shows, that in relation to Indonesian services FDI level, five variables are (independently) significant correlated; DEMO, GDPGR, GOVS, INVR and TRPR.

Lao PDR

Lao PDR is part of the less developed country in the CLMV group of ASEAN, therefore economic and risk data are not widely available. Apart from FDI and TRPR values, there are six available control variables. The FDI level for Lao ranges from $3.69 million to $842.72 million with mean of $261.25 million. The lowest tariff rate is 2.03% and highest of 9.70%, averaging at 7.01%. When the data is plotted, most data points are more scattered in the higher end of the spectrum, meaning tariff rate reduction process has just begun and has not been going on for many years, yet. The reason for this, is that Lao joined the ASEAN and AFAS much later than ASEAN-6 countries, therefore, their progress has been in a lag. Furthermore, due to the fact that Lao is in CLMV countries, it is more difficult to lower tariffs, as it is a crucial source of income for the country and lack thereof could potentially harm other social and economic development activities in the country.[73] Lao's highest trade openness level is 4.10% and average of 2.42%, which is extremely low. Despite the open-door policy agreed in 1986, the level of trade openness has just started to become an increasing trend after the financial crisis in 2008, see Figure *14*.

Figure 14 - Lao PDR Trade Openness



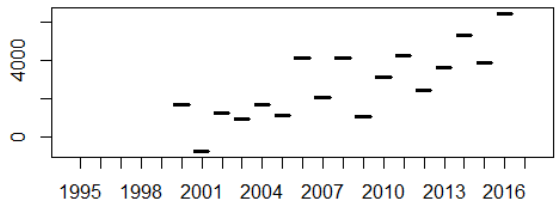
[73] ASEANONE, 2005

The correlation matrix for Lao PDR shows that multiple variables are individually correlated to level of services FDI with statistical significance; EXRT, INFR, TDGR, OPNS and TRPR. The latter correlation with services FDI is a negative and significant correlation (-0.6375, p-value=0.0474). OPNS and FDI has positive correlation (0.71, p-value = 0.0030).

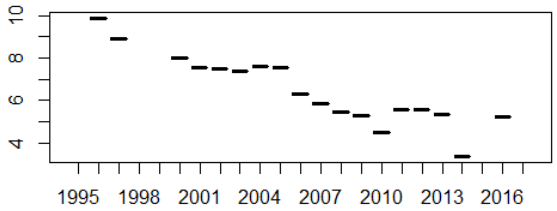
Malaysia

Malaysia is another country that has the lowest FDI level of negative investment. Services FDI investment in Malaysia is between $(781.10) to $6480.10 million. The reason for Malaysia's negative investment is the global economic downturn during 2001.[74] This global economic situation caused investors to become more cautious about financial execution plans for business operations abroad. This is prominent in the manufacturing and related services of electronics manufacturing. Thereafter, Malaysian services FDI trend becomes increasingly positive as shown in Figure *15a* below. The x-axis represents years and y-axis amount of FDI in million of US dollars.

Figure 15 - Malaysia FDI and Tariff



a. Malaysia services FDI trend



b. Malaysia applied tariff rate of all products

Malaysia is ambitious in trying to eliminate tariff rates. Figure *15b* shows the tariff elimination trend which is noticeably negatively correlated to FDI level. Despite the promising decreasing trend of tariff rate, the average is still at 6.49%, which is not as low as AFAS has aimed for. Correlation test of FDI and tariff rate confirms the graphical evaluation, that there is a negative correlation of -0.7028. Trade openness in Malaysia is average, where the range of lowest-highest measure of OPNS is between 13.06% to 17.25%. This gives a mean of 14.50%, which is quite high compared to countries previously discussed. Strangely, Pearson's correlation test results in negative significant correlation between trade openness and services FDI in Malaysia.

[74] Bank Negara Malaysia (Central Bank of Malaysia), 2001, pg. 37

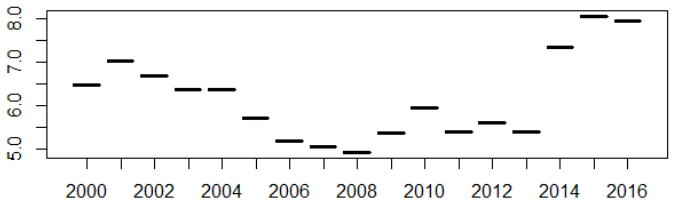
Myanmar

Before 2005, Myanmar's services FDI level has always been almost zero. The investment starts to slow catch on around 2007. The highest investment amount in service sector was in 2015 with $1608.20 million. The average value is $420.40 million, however is heavily influence by outliers. The tariff rate of all products has been in a decreasing trend since 2000, but unfortunately shot up again in 2012 to 5.43%. This is almost 1% higher than what Myanmar started with in 2000. Since 2012, the tariff rate has slow decreases with the current rate of 4.21% in 2015. Trade openness in Myanmar has a lot of fluctuation. From 2004-2009, level of trade openness was decreasing and ended up being the lowest in 2009. This is due to unstable political situation, where the country was under military rule until 2011. The national election in 2010 caused hostile investment environment, but was lifted when the election was completed and the U.S. government lifted political and economic sanctions off Myanmar.[75]As a result of high fluctuation of dependent and independent variables, there is no significant correlation between them.

Philippines

Though the positive trend of Philippines services FDI has been slow, the development is promising. The slight dip into the negative in 2001 did not persist, and turns upwards from then on. The lowest services FDI value was $(80.09) million in 2001, which the improvement since then has been tremendous proven by $7772.27 million in services FDI in 2016. On the other side, tariff rate elimination seems to be troublesome for the Philippines, where during 2011-2013, tariff rate has dropped as low as 3.92%, but this decrease did not continue, as it rises in years following. Compared to TRPR and FDI, Philippines's trade openness level has been fluctuating the most, see *Figure 16*. The lowest point is during 2008, where the Philippines, too, was hit hard by the global financial crisis. Though the construction sector during this year expanded, the stagnant of services growth led by poor performance of transportation, communication and services as well as the financial sector have translated into the figure shown below.[76]

Figure 16 - Philippines Trade Openness



[75] Rieffel L., 2016
[76] SEPO's Macroeconomic Section, 2009

Pearson's correlation test between Philippines' services FDI and tariff rates shows negative correlation, though not statistically significant. However, FDI and level of trade openness in Philippines show a positive significant correlation. This is in line with correlation results of total ASEAN.

Singapore

Unlike previously discussed countries, Singapore services FDI trend seems to be continuously increasing, see *Figure 17*. Apart from period of global financial crisis, Singapore has been able to increase its foreign direct investment in services annually. Its lowest FDI value is $3,699 million and reaching highest at $9,1753 million in 2012. This has the mean of $3,2861 million, significantly higher than the rest of ASEAN members. Referring to *Figure 18*, Singapore has been excelling in services trade for over a decade. Therefore, this high average of value is not unexpected. Its contribution of total ASEAN services FDI is so large, that its economy is at higher level than the rest to catch up on. Moreover, this is supported by its tariff rate level, as it has been at zero percent, fully eliminated tariff rates for all the investigated years. Singapore's ability to remove all import tariffs and maintaining high foreign direct investment rate, should be considered as role model for other countries in ASEAN.

Figure 17 - Singapore Services FDI

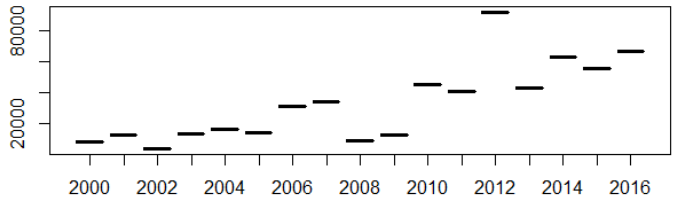
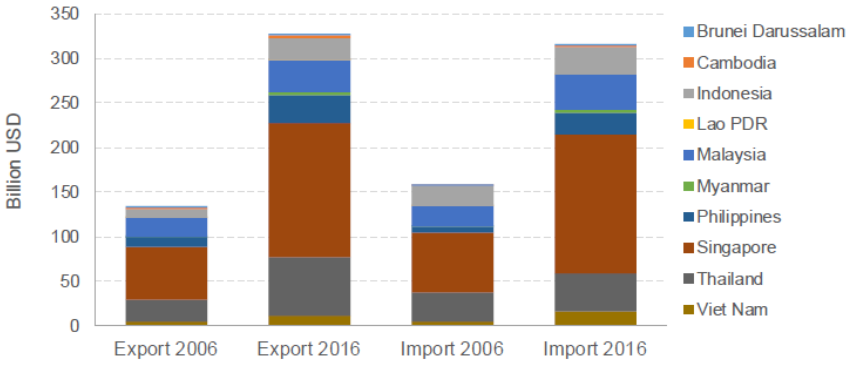


Figure 18 - Export and Import of Services of ASEAN Member States, 2006 vs. 2016



Source: The ASEAN Secretariat. (2017 p.12 Chart 8). ASEAN Services Report 2017 – The Evolving Landscape.

In addition to high services FDI value and full elimination of tariffs, Singapore's level of trade openness is equally advance. Its lowest level of trade openness between 2000-2016 is 31.93%, which is considerably higher compare to other countries' peak. The highest is at 52.39%, giving the average of 41.82%. Trade openness is also in an increasing trend, which could lead to even higher percentage of international trade for Singapore in the future.

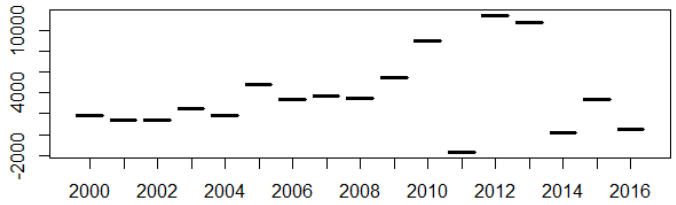
Pearson's correlation test could not evaluate between services FDI and TRPR, because tariff rate remains constant at zero for all years. For trade openness and FDI, there is a positive significant correlation.

Thailand

Though at one point, Thailand's services FDI soared up to $11,389 million, there has been a lot of fluctuation over the investigated years. *Figure 19* plots FDI values from 2000-2016. The significant drops in 2011 and 2014, raise questions to what influenced this plummet. According to Oxford Business Group news report[77], 2011 was a rough year for Thailand, as there were both drastic political and natural catastrophic changes that greatly impact the economy. Mid-year election results stirred uncertainties in the overall investment environment, as new policies were to be expected. In addition, natural disaster in Japan in March 2011, disrupted many business operations in Thailand. As Japanese investors established many production and export hubs in Thailand, the supply-chain system was rattled. To complement this disastrous event, heavy flood in Bangkok area during the second half of 2011 contributed to downward spiral of Thailand's economic situation. Flood effected great number of factories in the area established by foreign investors, mostly Japanese. Though this had most impact on manufacturing industry, related services were also suffering. Insurance companies, mainly invested by German and Japan, bared consequences of these events.[78] Another dip of services FDI is in around 2014. For the first half of the year, Thailand faced zero growth due to political uncertainties. This reduced "…confidence of households, business and foreign tourists."[79] The situation of foreign tourist attraction was majorly hindered by political situation and the tourist incoming remained low throughout the year. Due to these situations and uncertainties in Thailand in both 2011 and 2014, confidence of foreign investors needs to be reclaimed.

[77] Oxford Business Group, 2012
[78] Bank of Thailand, 2012
[79] Bank of Thailand, 2015

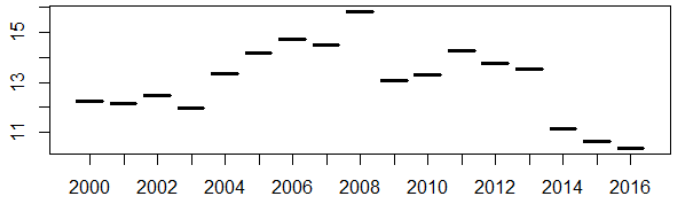
Figure 19 - Thailand Services FDI



As for tariff rates of all products, Thailand has not yet achieved zero tariff as Singapore. Thailand had tariff rate of 16.89% in 2000, and as of most recent data, it has decreased to 7.67%. The mean remains high at 11.30%. During 2004-2011, there were no progress in tariff elimination and over this period, the rate came to a halt at approximately 10%. Level of trade openness for Thailand has had a considerable amount of fluctuation. Figure *20* shows this fluctuation, where there was a slight peak in 2006 and 2008 and a great drop in 2014. In 2016, the situation worsens due to changes in political policies as well as limitation of business operations during the mourning period.[80]

Correlation test of both TRPR and OPNS on Thailand's services FDI do not show statistical significance for further discussion. This may be due to high frequency of unexpected events in the given time period.

Figure 20 - Thailand Trade Openness



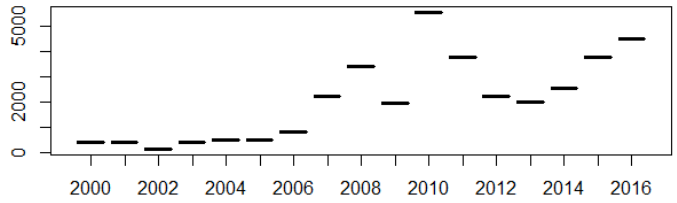
Vietnam

Vietnam's level of foreign direct investment in services industry is also as volatile as Thailand, see Figure *21*. From 2000-2008, there was a steady increase, but unfortunately shot back down in 2009. The reason for this is two folds, one being affected by the global financial crisis, and the other was a decrease of demand for Vietnamese exports. This was heavily affected, because Vietnam's main market are North American and Europe. In addition to this, there was a problem with touristic decrease throughout 2008 and 2009.[81] After a peak in 2010, services FDI level starts to decrease once again due to plummeting of

[80] Bank of Thailand, 2017
[81] Amer R., 2010

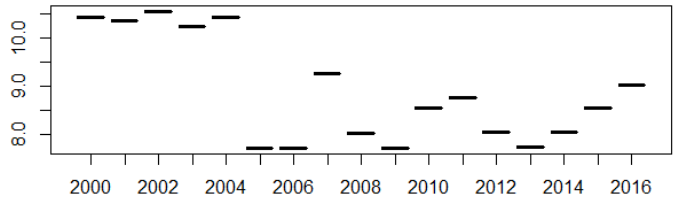
retail sales and advancement of competitors in the region.[82] Vietnam has the lower services FDI level of $132.80 million, highest at $5545.60 million and average of $2057.60 million.

Figure 21 - Vietnam Services FDI



Vietnam's road to tariff elimination is quite promising, because since 2001, the rate has been steadily decreasing with no exceptions. Its highest rate stood at 13.81% with the average of 9.64%, but was able to decrease to as low as 6.18% in 2015. Trade openness for Vietnam variates due to political situation, see Figure *22*. The dip during 2005-2006 was due to large interest in physical asset and capital endowment, which caused overconsumption of it, by paying little to no attention to innovation and productivity. This was not sustainable situation for international trade. Another plummet in 2013 was due to a burst in real estate, as price were soaring higher than expected and then plummeting exponentially. This heavily affected the banking sector as well as credit flows in the economy, consumption and any related businesses.[83]

Figure 22 - Vietnam Trade Openness



Pearson's correlation test results in negative significant correlation of TRPR and OPNS on FDI. The correlation for trade openness on FDI is not in the expected sign, which creates doubt appropriate for further examination.

[82] The World Bank, 2013
[83] Quan H.V., 2014

2.4.2.2 – Extreme Bounds Analysis

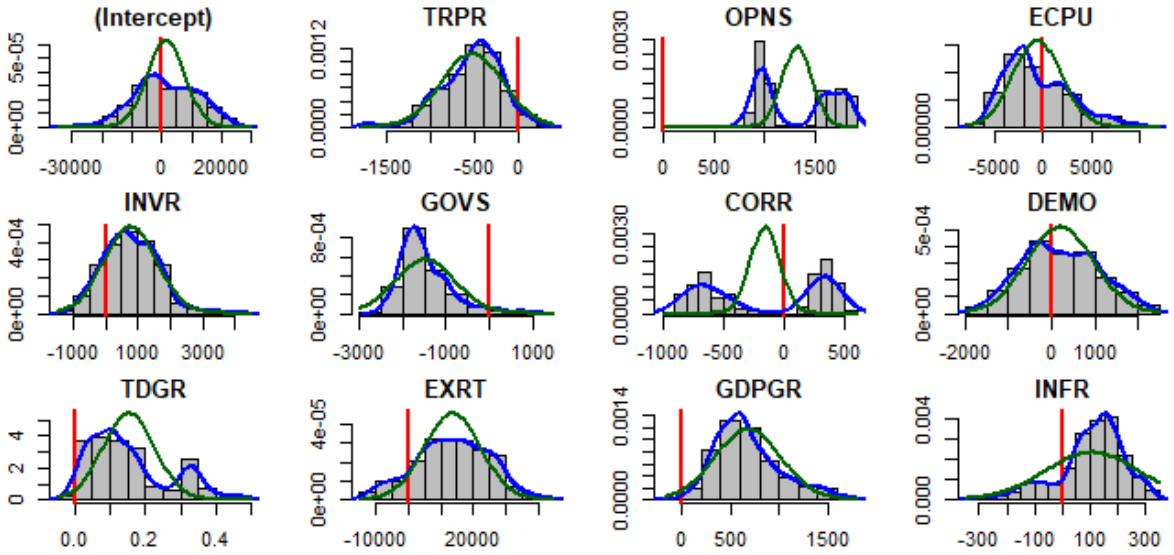
. The initial determination was to run linear regression model on both total ASEAN as well as individual Member States. However, with the small number of data points, linear regression model is not longer suitable for each country evaluation. Assisting this conclusion are the F-Tests for each country, tested on tariff rates, trade openness and services foreign direct investment, for which most did not result in significant result. For this rationale, extreme bounds test assists this relationship test of TRPR, OPNS as well as control variables on services FDI per country. To maintain statistic consistency, confidence level will remain at 10%.

For a more reliable outcome, a naïve test is ran to determine a free variable suited for extreme bounds analysis. This is done by setting FDI as y-variable and all other variables as doubtful. By taking all combinations of variables into consideration, we can see which one persist to have coefficients with the same sign throughout the test. The result determines free variable to be considered in every regression once other tests are ran. Free variable means that its relationship to dependent variable SFDI remains the same through the changes introduced into the equation. A histogram is then produced, see Figure *23*. Red vertical axis is zero, which represents the value of null hypothesis. Grey bins are OLS coefficients resulted from all combination of regression model. Blue curves show the distribution of these coefficients. Green line shows the normal distribution estimation. The more blue and green lines align, the more it suggests that the coefficients are normally distributed.[84] From the histograms, we can see that all of trade openness coefficients are to the right of zero, meaning all coefficients are positive. This consistency of coefficient sign allows us to take OPNS as free variable for tests of all countries. Tariff rate (TRPR) is the focus variable, because this is the main interest of this thesis.

In addition, from coefficient density plot, we can see that they are not all normally distributed.
Therefore, for the Sala-i-Martin's EBA test, we will be considering the result of generic model.

[84] Hlavac M., 2016

Figure 23 - Histograms of Results Estimation



Brunei Darussalam

EBA tests of main variables for Brunei Darussalam are consistent; EBA, Leamer's EBA and Sala-i-Martin's EBA. Both tariff rates and trade openness show high percentage of positive, though all tests marked these as fragile; not statistical significant. The introduction of investment environment variables into the equation results in the same conclusion. Political environment indicators make matter worse, as the TRPR and OPNS not only present wrong signs, but remain insignificant. Macroeconomics indicators result in the same conclusion. By including all control variables accumulatively, the insignificance persists.

Cambodia

For Cambodia, several indicators needed to be taken out due to lack of data; ECPU, INVR, GOVS and DEMO. EBA test for TRPR and OPNS on FDI without control variables show a promising sign of tariff rates having negative significant relationship to FDI. Trade openness on the other hand does not show significant relationship. Investment environment indicators were not available for evaluation. With political environmental indicators, TRPR is not statistical significant according to extreme bounds analysis, even though most coefficients are negative shown through Sala-i-Martin's EBA. Macroeconomic indicators influence TRPR and OPNS, so that they do not have robust relationship to Cambodia's services FDI. Combination of all control variables result in insignificant relationship of TRPR and OPNS on FDI.

Indonesia

Tariff rate in initial EBA test without control variables has a negative significant relationship to services FDI. All three tests, EBA; Leamer's and Sala-i-Martin's show strong evidence of this effect. However, trade openness is not significant. This effect continues when environmental indicators are introduced. Political indicators influence OPNS and TRPR in a way that 94.64% of TRPR coefficients in Sala-i-Martin's EBA have negative sign, but EBA test shows that only 40% of these negative coefficients are statistical significant. Macroeconomics indicators give the same result. Combination of all control variables do not show significant relationship of Indonesian TRPR and OPNS on FDI.

Lao PDR

For all three types of EBA tests, Lao's TRPR and OPNS show significant relationship towards FDI. Tariff rate shows a robust negative influence, while trade openness a positive one. Risks of Lao's investment environment cannot be evaluated, as required data are not available. The only available political environment indicator is CORR, which influences the relationship of the baseline regression. Trade openness remains to have positive significant relationship to FDI, while tariff rate showing only 66.67% of negative significant coefficients. Although, Sala-i-Martin's EBA with generic model shows 97.02% of TRPR coefficients lie below zero. With macroeconomic indicators, the relationship is inverted. Trade openness no longer has significant relationship to FDI, though tariff rates show strong robust negative influence for all three tests. Combination of all control variables lessen number of significant coefficients, where 84.91% of TRPR coefficients are negative significant and only 56.60% of OPNS are positive significant. Therefore, there is no strong evidence of their relationship to FDI.

Malaysia

Trade openness and tariff rates do not show strong evidence of relationship to Malaysia's services FDI. The addition control variables do not change the outcome of baseline regression, therefore result for Malaysia linear regression is inconclusive. When compared to the analysis of data structure in the section above, TRPR has negative correlation to FDI, but this does not translate to TRPR influence on FDI.

Myanmar

Running the same steps and tests for Myanmar did not give a satisfying result. The extreme bounds analyses do not show any sign of statistical significant relationship of trade openness and tariff rates with services foreign direct investment.

Philippines

On the other end of the spectrum compared to Malaysia and Myanmar, Philippines' trade openness and tariff rates show significant relationship to services FDI without control variables. EBA shows all OPNS coefficients are positive and significant, while TRPR coefficients are negative and significant. Results

of Leamer's EBA and Sala-i-Martin's EBA coincides with EBA. Investment risks impact this relationship, as with these indicators, tariff rate no longer shows strong evidence of relationship. Only 50% of coefficients are negative and significant. Political indicators cause TRPR and OPNS to not show any relationship to FDI. The same conclusion goes for macroeconomics indicators. With all variables considered, relationships are no longer significant. Only 34.36% of trade openness coefficients are significant and 4.90% for tariff rate.

Singapore

Singapore is a special case, as the tariff rate is constant at zero for all years. Although the rate is the same, level of FDI differs, which is curious to what actually is influencing these changes. Trade openness is therefore the only variable in Singapore's baseline regression. Extreme bounds analysis result in 100% of OPNS coefficients are in positive significant. Leamer's EBA consider the relationship of OPNS on FDI as robust and Sala-i-Martin's EBA shows that 99.92% of coefficients are greater than zero. With addition of other indicators, OPNS is set to focus variable instead of free variable like it is used for other countries. Investment environment measures do not change the relationship of OPNS on FDI. Trade openness remains positively significant for all three types of EBA. Political environment indicators however do not give the same result, as coefficients of OPNS are only 25% significant. Leamer's EBA also marks this as fragile. This result also applies to addition of macro indicators and combination of all control variables.

Thailand

The distribution of beta coefficients according to EBA for Thailand's tariff rates and trade openness with regards to FDI show that all of OPNS coefficients are positive and TRPR are negative. However, they are both not statistical significant. Unfortunately, this result persists throughout the addition of control variables. Therefore, it is inconclusive as to which indicators have direct relationship to Thailand's FDI rate.

Vietnam

Vietnam's tariff rates have robust negative relationship with services FDI. Beta coefficients of trade openness however only show that 50% of them are significant. Leamer's EBA only mark TRPR as robust. This same result applies for regression inclusive investment and political environment indicators. With macroeconomics indicators, coefficients are in the expected signs, positive for OPNS and negative for TRPR, but less of them are significant compared to earlier combinations. When all control variables are considered, TRPR has 82.81% negative significant coefficients, while OPNS only has 62.10% of positive significant coefficients. These levels of statistical significance are not high enough to conclude that there is a strong relationship between tariff rate and trade openness on services foreign direct investment.

Evaluation

Results from the extreme bounds analysis vary country to country. Out of ten countries, only five shows tariff rates having negative significant relation to services foreign direct investment. Furthermore, only three out of ten trade openness are positively significant related to services FDI. Majority of these statistical significant results are no longer significant when control variables are added. This can be said, that the relationship of tariff rate and trade openness do not have robust effect on services FDI on country level.

2.5 Conclusion

Robust results from panel data estimator and inconsistencies on country level can be concluded as the following. For ASEAN region, there is a significant correlation and relation between how open to trade in international market it is and the level of influx in foreign direct investment of services industry. Level of trade openness and tariff rates were the main focus of this statistical experiment that allowed us to investigate the effect of free trade policy in services in the region. Although tariff rate is the indicator chosen to represent this policy, there is not much conclusion to be made. Tariff rate by itself tends not to have a direct association with level of region's services foreign direct investment, instead, trade openness is a better indicator. Due to the fact that member states of ASEAN have such diversity in political, economic and cultural aspects, tariff rate may not be the only important determinant of services FDI. The differences in country effect and diversity are proven by country level analyses. Foreign investors, not only observe the level of tariff rates applied in intra-ASEAN, but rather the trade environment and activities. Economic and political behavior gives foreign investors better understanding of the investment risk level, which could allow them to better estimate counter mechanisms to prevent and/or reduce costs from unexpected events.

ASEAN's level of trade openness is proven to have robust association to its FDI level. This robustness was tested by adding control variables chosen by extensive research of previous studies. These relevant variables are in majority estimator of investment and political environment risks. A relationship that was prior not foreseen to have explanatory power on services FDI is currency exchange rates. Foreign currency exchange shows a strong evidence of statistical significant relationship towards ASEAN's services FDI. The amount of capital is no surprise an important factor for foreign investors who intend to make large sum of investment in a developing economy. Fluctuation of host country currency in ASEAN tends to have relationship to the level of foreign direct investment inflow. As this thesis has only taken the exchange between one host country currency units in relative to US dollars, it is to be concluded that as U.S. dollars get stronger, there will be more investment influx into ASEAN, one of the reasons could be that this eases this potential loss from unexpected events. Although ASEAN is an

attractive region for investment, there are certainly other risks involve. This statement, however is not proven to statistical significance in this thesis, because no other risk indicators (economic, political, macroeconomics) show strong evidence of association to services FDI inflow. For this reason, the above conclusion is merely a speculation based on the results of this research, but plausible according to prior studies.

On country level, effect of tariff rates and trade openness vary from one another. Tariff rates show significant association to services FDI in more countries than trade openness. Half of the time, tariff rate has negative significant association to services FDI, where trade openness only three out of ten countries. This is the result from baseline linear model regression. These associations are as suspected to not be as robust as result from the total ASEAN region, are proven by additional control variables. For majority, 7 out of 10 countries results do not change, when investment environment risk indicators are introduced to the baseline regression. Similarly, to 6 out of 10 countries when political risk indicators are introduced. Macroeconomics indicators effect the relationship of tariff rate and trade openness on services FDI, where they are no longer influential. Discrepancy in results on country level makes it challenging to form a concrete conclusion. It is no doubt, that on country level, tariff rate and trade openness react differently than on regional level. For ASEAN region, trade openness has positive and significant association to FDI, while for country level, there is higher percentage of tariff rate having association to FDI. With the reason of inconsistency in relationships on country level, only results from panel data estimator on regional level can be said with validity; ASEAN's free trade policy measured by tariff rate reduction do not show evidence of association to services FDI inflow, though level of trade openness shows great credibility evidence of its relationship with services foreign direct investment.

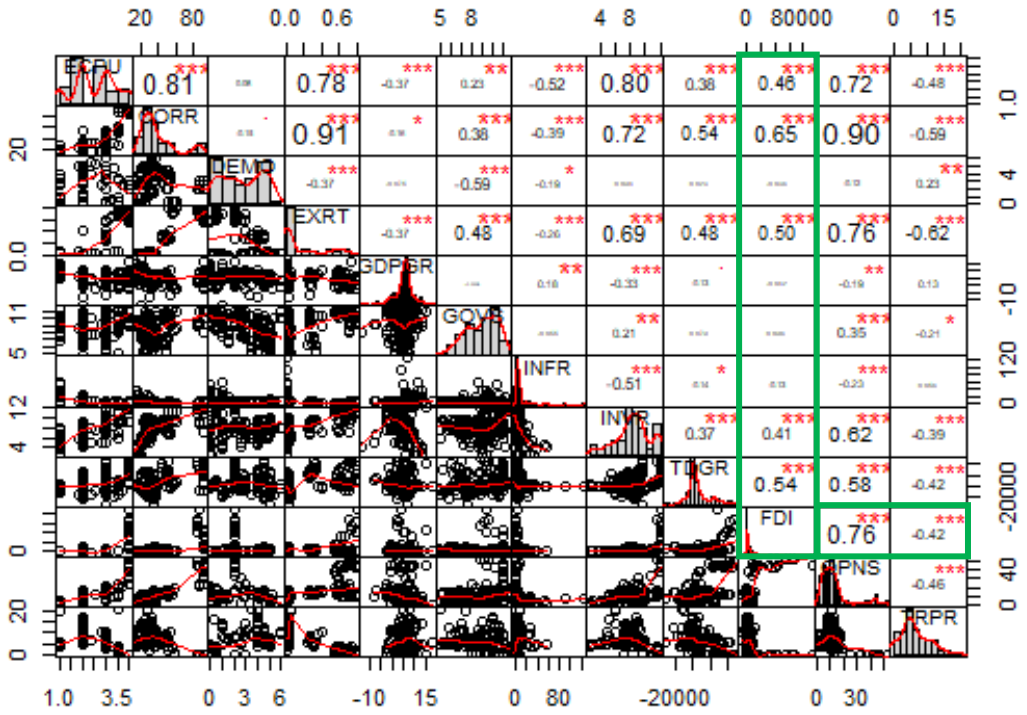
Part III - Limitations and Critical Evaluation

The outcome of this thesis is satisfactory, where one of the potential determinants of services FDI in ASEAN representing free trade policy has statistical influence on the level of FDI. This result can be useful to future studies to build upon, by utilizing alternative control variables. Several indicators were not used in this research that could be influential to the result, such as market size measured by GDP per capita, level of infrastructure investment, quality of labor as well as level of education related to service industry. Moreover, instead of using tariff rates of all products, the result could have more explanatory power, if it were only tariff rates of services associating with services FDI. On country level, number of years could be extended in hope of having more observations to allow statistics tests to be more feasible, although the status of data availability could limit this option.

In terms on management, it is helpful to see the determinants of FDI that past investors have based their investment decisions on. Future research can be built from this basis by looking deeper into firm level to investigate the performance of firms that chose trade openness and foreign exchange rate as decision making factors.

Appendix

A. Correlation Matrix of ASEAN Dataset



B. ASEAN Dataset Panel Data Estimator

a. TRPR on FDI

```
Oneway (individual) effect Within Model

Call:
plm(formula = FDI ~ TRPR, data = dataset.p, model = "within")

Unbalanced Panel: n = 10, T = 10-17, N = 143

Residuals:
Min.   1st Qu.    Median   3rd Qu.      Max.
-29161.55   -744.41   -195.81    674.22  58892.05

Coefficients:
Estimate Std. Error t-value Pr(>|t|)
TRPR  -368.73     462.36 -0.7975   0.4266

Total Sum of Squares:    1.0701e+10
Residual Sum of Squares: 1.065e+10
R-Squared:      0.004795
Adj. R-Squared: -0.070599
F-statistic: 0.635986 on 1 and 132 DF, p-value: 0.4266
```

b. OPNS on FDI

```
Oneway (individual) effect Within Model

Call:
plm(formula = FDI ~ OPNS, data = dataset.p, model = "within")

Unbalanced Panel: n = 10, T = 14-17, N = 160
```

```
Residuals:
     Min.   1st Qu.    Median   3rd Qu.      Max.
-27789.46  -2294.27    307.07   2199.52  57151.67

Coefficients:
     Estimate Std. Error t-value  Pr(>|t|)
OPNS  1790.59     273.45  6.5481 8.863e-10 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Total Sum of Squares:    1.0793e+10
Residual Sum of Squares: 8381400000
R-Squared:      0.22346
Adj. R-Squared: 0.17135
F-statistic: 42.8776 on 1 and 149 DF, p-value: 8.8635e-10
```

c. TRPR and OPNS on FDI

```
Oneway (individual) effect Within Model

Call:
plm(formula = FDI ~ TRPR + OPNS, data = dataset.p, model = "within")

Unbalanced Panel: n = 10, T = 9-17, N = 137

Residuals:
    Min.  1st Qu.   Median  3rd Qu.     Max.
-28007.2  -2287.1    279.9   2202.2  57049.1

Coefficients:
     Estimate Std. Error t-value  Pr(>|t|)
TRPR  -567.93     435.41 -1.3043    0.1945
OPNS  1896.15     300.71  6.3055 4.518e-09 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Total Sum of Squares:    1.0674e+10
Residual Sum of Squares: 8.063e+09
R-Squared:      0.24463
Adj. R-Squared: 0.17815
F-statistic: 20.2404 on 2 and 125 DF, p-value: 2.4274e-08
```

Reference

Acharya, A. (2014). Constructing a Security Community in Southeast Asia: ASEAN and the problem of regional order – Why ASEAN?. Suffolk: Routledge Taylor & Francis Group.

AEC. (2003). Protocol to Amend the Agreement on the Common Effective Preferential Tariff (CEPT) Scheme for the ASEAN Free Trade Area (AFTA) for the Elimination of Import Duties.

Agarwal, J. & Feils, D. (2007). Political risk and the internationalization of firms: An empirical study of Canadian-based export and FDI firms. Canadian Journal of Administrative Sciences, Volume 24, Issue 3

Aharoni, Y. (1966). The foreign investment decision process. Div. of Research, Graduate School of Business Administration, Harvard Univ. XVII, 362 S.

Ali, F.A. & Fiess, N. & MacDonald, R. (2010). Do Institutions Matter for Foreign Direct Investment?. Open Econ Rev (2010) 21: 201.

Amer, R. (2010). Vietnam in 2009: Facing the Global Recession. Asian Survey, 50(1), 211-217

Ang, J.B. (2008). Determinants of foreign direct investment in Malaysia. Journal of Policy Modeling 30 (2008) 185–189

Arbatli, E. (2011, p.17). Economic Policies and FDI Inflows to Emerging Market Economies. IMF Working Paper

ASEAN Secretariat - ASEAN FDI Database. (2017). Flows of Inward Foreign Direct Investment (FDI) by Host Country and Source Country (in US$ Million)

ASEAN Secretariat. (2013). ASEAN Comprehensive Investment Agreement (ACIA).

ASEAN Secretariat. (2013). ASEAN Human Rights Declaration. Retrieved from ASEAN: http://www.asean.org/storage/images/ASEAN_RTK_2014/6_AHRD_Booklet.pdf

ASEAN Secretariat. (2014). Our people our future together. Retrieved from ASEAN: http://asean.org/storage/2017/09/2.-Feb-2014-Mid-Term-Review-of-the-ASCC-Blueprint-2009-2015-Executive-Summary.pdf

ASEAN Secretariat. (2015). ASEAN COMPREHENSIVE INVESTMENT AGREEMENT, A Guidebook for Businesses & Investors. Retrieved from ASEAN: http://asean.org/storage/2012/05/ACIA-Guidebook-for-Businesses-and-Investors-2015.pdf

ASEAN Secretariat. (2015). ASEAN Integration in Services.

ASEAN Secretariat. (2016). 2015 ASEAN Socio-Cultural Community (ASCC) Scorecard. Retrieved from ASEAN: http://www.asean.org/storage/2016/04/9.-March-2016-2015-ASCC-Scorecard-1.pdf

ASEAN Secretariat. (2016). ASEAN Political-Security Community Blueprint 2025. Retrieved from ASEAN: http://www.asean.org/wp-content/uploads/2012/05/ASEAN-APSC-Blueprint-2025.pdf

ASEAN Secretariat. (2017). ASEAN Community Progress Monitoring System.

ASEAN Secretariat. (2017). ASEAN Economic Community (AEC). Retrieved from ASEAN: http://asean.org/storage/2012/05/7c.-May-2017-Factsheet-on-AEC.pdf

ASEAN Secretariat. (2017). The ASEAN Charter. Retrieved from: http://asean.org/storage/2012/05/The-ASEAN-Charter-21-th-Reprint-Amended-17-05-2017-1.pdf

ASEAN. (2018). ASEAN Economic Community. Retrieved from ASEAN: http://asean.org/asean-economic-community/

ASEAN. (2018). ASEAN OVERVIEW: ESTABLISHMENT. Retrieved from ASEAN: http://asean.org/asean/about-asean/overview/

ASEAN. (2018). ASEAN Socio – Cultural Community. Retrieved from: http://asean.org/asean-socio-cultural/

ASEANONE. (2005). CLMV countries under AFTA: coping with revenue losses. Retrieved from ASEAN: http://www.asean.org/uploads/archive/article33.pdf

Baker, S.R. & Bloom, N. & Davis, S.J. (2016). Measuring economic policy uncertainty. The Quarterly Journal of Economics, Vol. 131, Issue 4

Baltagi, B. (2012). Econometric Analysis of Panel Data: The One-way Error Component Regression Model.

Banga, R. (2003). Impact of government policies and investment agreements on FDI inflows. Indian council for research on international economic relations.

Bank Negara Malaysia (Central Bank of Malaysia). (2001, p. 37). The Malaysian Economy in 2001. Retrieved from BNM: https://www.bnm.gov.my/files/publication/ar/en/2001/ch01.pdf

Bank of Thailand. (2012). Thailand Floods 2011 Impact and Recovery from Business Survey. Retrieved from BOT: https://www.bot.or.th/English/MonetaryPolicy/EconomicConditions/BLP/ThaiFloodSurvey2011_Eng.pdf

Bank of Thailand. (2014). Thailand's Economic conditions in 2014. Retrieved from BOT: https://www.bot.or.th/English/MonetaryPolicy/EconomicConditions/AnnualReport/AnnualReport/Annual_eng_2014.pdf

Bank of Thailand. (2016). Thailand's Economic conditions in 2016. Retrieved from BOT: https://www.bot.or.th/English/MonetaryPolicy/EconomicConditions/AnnualReport/AnnualReport/annual_2016_V2.pdf

Barkema, H. G. & Vermeulen, F. (2017). International Expansion Through Start-Up or Acquisition: A Learning Perspective. Academy of Management Journal, Vol. 41, No. 1

Brouthers, K.D. & Brouthers, L.E. (2003). Why Service and Manufacturing Entry Mode Choices Differ: The Influence of Transaction Cost Factors, Risk and Trust. Journal of Management Studies, Volume40, Issue5, Pages 1179-1204

Büthe, T. & Milner, H.V. (2008). The Politics of Foreign Direct Investment into Developing Countries: Increasing FDI through International Trade Agreements?. American Journal of Political Science, Volume52, Issue4, Pages 741-762

Chakrabarti, A. (2001). The Determinants of Foreign Direct Investment: Sensitivity Analyses of Cross-Country Regressions. KYKLOS, Vol. 54 – 2001 – Fasc. 1, 89–114

Chanegriha, M. & Stewart, C. & Tsoukis, C. (2017). Identifying the robust economic, geographical and political determinants of FDI: an Extreme Bounds Analysis. Empirical Economics, Volume 52, Issue 2, pp 759–776

Chia, S.Y. (2014). Towards Freer Movement of Skilled Labour in AEC 2015 and Beyond. Economic Research Institute for ASEAN and East Asia.

Clare, G. & Gang, I.N. (2010). Exchange rate and political risk, again. Emerging Markets Finance & Trade May–June 2010, Vol. 46, No. 3, pp. 46–58.

Desjardins, J. (2016). Timeline: How the Global Economy Played Out in 2015. Retrieved from Visual Capitalist: http://www.visualcapitalist.com/timeline-how-the-global-economy-played-out-in-2015/

Fawcett, P. et al. (2017). Anti-Politics, Depoliticization, and Governance. Oxford: Oxford University Press.

Guerron-Quintana, P.A. (2012). Risk and Uncertainty. Business Review, Q1

Hayakawa, K. & Kimura, F. & Lee, H.H. (2013). How Does Country Risk Matter for Foreign Direct Investment?. The Developing Economies, Volume 51, Issue 1

Hennart, J.F. (1998). Transaction cost theory and the multinational enterprise.

Hew, D. (2007). Brick by Brick: The Building of an ASEAN Economic Community. Singapore: Utopia Press Pte Ltd.

Hlavac, M. (2016). ExtremeBounds: Extreme Bounds Analysis in R. Journal of Statistical Software, 72(9), 1-22

Hussain, M. & Brookins, O. (2001). On the Determinants of National Saving: An Extreme-Bounds Analysis. Weltwirtschaftliches Archiv, 137(1), 150-174.

Ismail, N. W. & Smith, P. & Kugler, M. (2009). The Effect of ASEAN Economic Integration on Foreign Direct Investment. Journal of Economic Integration, 24(3); 385-407

Johanson, J. & Widersheim-Paul, F. (1975). The internationalization of the firm — Four Swedish Cases. Journal of Management Studies, Volume 12, Issue 3, Pages 305-323

Kaliappan, S.R. & Khamis, K.M. & Ismail, N.W. (2015). Determinants of Services FDI Inflows in ASEAN Countries. International Journal of Economics and Management, 9 (1): 45 - 69 (2015)

Kim, H. (2010). Political Stability and Foreign Direct Investment. International Journal of Economics and Finance, Vol 2, No.3.

Kim, J. (2006). The Determinants of Labor Market Institutions: A Panel Data Study. Research Papers in Economics 2006:10

Knight, FH. (1921). Risk, uncertainty and profit. London School of Economics and Political Science, Vol. 7

Kogut, B. & Sea, J.C. (1996). Platform investments and volatile exchange rates: direct investment in the U.S. by Japanese electronic companies. The Review of Economics and Statistics 78, 221–231.

Kolstad, I. & Villanger, E. (2007). Determinants of foreign direct investment in services. European Journal of Political Economy 24 (2008) 518–533

Kwok, C.Y. & Reeb, D.M. (2000). Internationalization and Firm Risk: An Upstream-Downstream Hypothesis. Journal of International Business Studies, 31.4 (Fourth Quarter 2000): 611-629

Liesch, P.W. &Welch, L.S. & Buckley, P.J. (2011). Risk and Uncertainty in Internationalisation and International Entrepreneurship Studies: Review and Conceptual Development. MIR: Management International Review, Vol. 51, No. 6, 50 Years of MIR (2011), pp. 851-873

Luo, Y. (1999, p. 201). Entry and cooperative strategies in international business. Westport, USA: Quorum Books

Luo, Y., & Tung, R. L. (2007). International expansion of emerging market enterprises: A springboard perspective. Journal of International Business Studies, Volume 38, Issue 4, pp 481–498.

Masron, T. A. (2013). Promoting intra-ASEAN FDI: The role of AFTA and AIA. Economic Modelling, 31; 43–48

Miller, K. D. (1992). A Framework for Integrated Risk Management in International Business. Journal of International Business Studies, Volume 23, Issue 2, pp 311–331

Miller, K. D. (1992). A Framework for Integrated Risk Management in International Business. Journal of International Business Studies, Vol. 23, No. 2 (2nd Qtr., 1992), pp. 311-331

Nguyen, Q. & Kim, T. & Papanastassiou, M. (2017) Policy uncertainty, derivatives use, and firm-level FDI. Journal of International Business Studies (2018) 49, 96–126

Nordal, K.B. (2001). Country risk, country risk indices and valuation of FDI: a real options approach. Emerging Markets Review 2, 197-217

OECD. (2012, p. 56). OECD Reviews of Regulatory Reform INDONESIA MARKET OPENNESS. Retrieved from: https://www.oecd.org/indonesia/Chap%204%20-%20market%20openness.pdf

Orlitzky M. & Siegel D.S. & Waldman D.A. (2011). Strategic Corporate Social Responsibility and Environmental Sustainability. Business & Society,Vol 50, Issue 1, pp. 6 – 27

Oxford Business Group. (2012). Thailand: Year in Review 2011. Oxford Business Group. Retrieved from: https://oxfordbusinessgroup.com/news/thailand-year-review-2011

Palacios, A. & Griffin, T. (2011). Country risks and FDI: empirical evidence from Latin American countries. Journal of International Business Research, Volume 10, Number 1, 2011

Pan, M.S. & Fok, R. & Liu, Y.A. (2007). Dynamic linkages between exchange rates and stock prices: Evidence from East Asian markets. International Review of Economics & Finance Volume 16, Issue 4, 2007, Pages 503-520

Peng, M.W. (2012, p. 140). Global Strategy. South-Western; Sout-Western Cengage Learning.

Penrose, E.T. (1956). Foreign Investment and the Growth of the Firm. The Economic Journal, Vol. 66, No. 262, pp. 220-235

Presidential Regulation of the Republic of Indonesia (2016). Presidential regulation of the republic of Indonesia Number 44 year 2016. Retrieved from: http://www.bkpm.go.id/images/uploads/prosedur_investasi/file_upload/REGULATION-OF-THE-PRESIDENT-OF-THE-REPUBLIC-OF-INDONESIA-NUMBER-44-YEAR-2016.pdf

Pritchett, L. (1996). Measuring outward orientation in LDCs: Can it be done?. Journal of Development Economics, Vol. 49, 307-335

Quan, H.V. (2014). Vietnam's Political Economy in Transition (1986-2016). Stratfor. Retrieved from: https://worldview.stratfor.com/article/vietnams-political-economy-transition-1986-2016

Ramasamy, B. & Yeung, M. (2010). The Determinants of Foreign Direct Investment in Services.The World Economy.

Riedl, A. (2010). Location factors of FDI and the growing services economy: Evidence for transition countries. Economics of Transition, Volume 18(4) 2010, 741–761

Rieffel, L. (2016). Myanmar: A little trade issue with big consequences. Brookings. Retrieved from Brookings: https://www.brookings.edu/blog/up-front/2016/09/07/myanmar-a-little-trade-issue-with-big-consequences/

Sekkat, K. & Veganzones-Varoudakis, M.A. (2007). Openness, Investment Climate, and FDI in Developing Countries. Review of Development Economics, 11(4), 607–620

SEPO's Macroeconomic Section. (2009). Riding Through the Crisis in 2008 Bumpier Road Ahead in 2009. Economic Report Senate Economic Planning Office. Retrieved from: https://www.senate.gov.ph/publications/ER%202009-01%20-%20Riding%20through%20the%20crisis%20in%202008.pdf

Sharan, V. (2006, p. 165). International Business 2/e , Concepts, Environment And Strategy. India: Pearson Education.

Siah, K. L. & Choong, C. K. & Yusop, Z. (2009). AFTA and the Intra-Trade Patterns among ASEAN-5 Economies: Trade-Enhancing or Trade-Inhibiting?. International Journal of Economics and Finance, Volume 1, No. 1.

Simon, J.D. (1982). Political risk assessment: Past trends and future prospects. Columbia Journal of World Business, Fall 1982

Statista. (2018). Gross domestic product (GDP) of the ASEAN countries from 2008 to 2018 (in billion U.S. dollars). Retrieved from Statista: https://www.statista.com/statistics/796245/gdp-of-the-asean-countries/

The PRS Group. (2012). International Country Risk Guide Methodology. Retrieved from The PRS Group: https://www.prsgroup.com/wp-content/uploads/2012/11/icrgmethodology.pdf

The World Bank, Poverty Reduction and Economic Management Unit South Asia Region. (2009). The Service Revolution in South Asia. Poverty Reduction and Economic Management Unit South Asia Region. Retrieved from: http://siteresources.worldbank.org/INTRANETTRADE/Resources/239054-1239120299171/5998577-1254498644362/6461208-1300395869284/SA_Service.pdf

The World Bank. (2013). An Update on Vietnam's Recent Economic Development July 2013: Key Findings. The World Bank. Retrieved from: http://www.worldbank.org/en/news/feature/2013/07/12/taking-stock-july-2013-an-update-on-vietnams-recent-economic-development-key-findings

Tomlin, K. M. (2007). Japanese FDI into U.S. service industries: Exchange rate changes and services tradability. Japan and the World Economy 20 (2008) 521–541.

Tversky, A. & Fox, C. R. (1995). Weighing risk and uncertainty. Psychological Review, Vol. 102, No.2, 269-283

UNCTADSTAT. (2016). http://unctadstat.unctad.org/EN/

Wacziarg, R. (2001). Measuring the Dynamic Gains from Trade. The World Bank Economic Review, Vol. 15, No. 3 (2001), pp. 393-429

Wezel, T. (2004). Foreign Bank Entry into Emerging Economies: An Empirical Assessment of the Determinants and Risks Predicated on German FDI Data. Studies of the Economic Research Centre

Williams, B. (1997). 'Positive Theories of Multinational Banking: Eclectic Theory versus Internalisation Theory', Journal of Economic Surveys, 11, 71–100.

Wooldrige, J.M. (2012). Introductory Econometrics: A Modern Approach,Fifth Edition. Mason, USA: South-Western Cengage Learning.

World Trade Organization, (2016). Trends in world trade: Looking back over the past ten years.

Zhao, J. & Kim, S. & Du, J. (2003). The Impact of Corruption and Transparency on Foreign Direct Investment: An Empirical Analysis. MIR: Management International Review, 43(1), 41-62.